AUTHOR INDEX VOLUMES 128–131

A

Aaronson, S. A. *See* LaRochelle, Dirsch, Finch, Cheon, May, Marchese, Pierce, and Aaronson.

Abe, E. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.

Acharya, U., McCaffery, J. M., Jacobs, R., and Malhotra, V. Reconstitution of vesiculated Golgi membranes into stacks of cisternae: Requirement of NSF in stack formation. 129:577.

Adam, E. J. H. *See* Chi, Adam, and Adam.

Adam, S. A. *See* Chi, Adam, and Adam.

Adam, T., Arpin, M., Prévost, M.-C., Gounon, P., and Sansonetti, P. J. Cytoskeletal rearrangements and functional role of T-plastin during entry of *Shigella flexneri* into HeLa cells. 129:367.

Adams, L., Carlson, B. M., Henderson, L., and Goldman, D. Adaptation of nicotinic acetylcholine receptor, myogenin, and MRF4 gene expression to long-term muscle denervation. 131:1341.

Adler, R. *See* Wang and Adler.

Aeschlimann, D., Kaupp, O., and Paulsson, M. Transglutaminase-catalyzed matrix cross-linking in differentiating cartilage: Identification of osteonectin as a major glutaminyl substrate. 129:881.

Afshar, K., Scholey, J., and Hawley, R. S. Identification of the chromosome localization domain of the *drosophila* nod kinesin-like protein. 131:833.

Agard, D. A. *See* Moritz, Braunfeld, Fung, Sedat, Alberts, and Agard.

— *See* Urata, Parmelee, Agard, and Sedat.

Ahn, A. H., and Kunkel, L. M. Syntrophin binds to an alternatively spliced exon of dystrophin. 128:363.

Aigner, L., and Caroni, P. Absence of persistent spreading, branching, and adhesion in GAP-43–depleted growth cones. 128:647.

Aigner, S. *See* Ruppert, Aigner, Hubbe, Yagita, and Altevogt.

Aigner, T. *See* Roach, Erenpreisa, and Aigner.

Aitchison, J. D., Blobel, G., and Rout, M. P. Nup120p: A yeast nucleoporin required for NPC distribution and mRNA transport. 131:1659.

—, **Rout, M. P., Marelli, M., Blobel, G., and Wozniak, R. W.** Two novel related yeast nucleoporins Nup170p and Nup157p: Complementation with the vertebrate homologue Nup155p and functional interactions with the yeast nuclear pore–membrane protein Pom152p. 131:1133.

Aizawa, H. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.

Akiyama, S. K. *See* Miyamoto, Teramoto, Coso, Silvio Gutkind, Burbelo, Akiyama, and Yamada.

Aktories, K. *See* Schmalzing, Richter, Hansen, Schwarz, Just, and Aktories.

Akusjärvi, G. *See* Carvalho, Seeler, Öhman, Jordan, Pettersson, Akusjärvi, Carmo-Fonseca, and Dejean.

Albers, K. M., Davis, F. E., Perrone, T. N., Lee, E. Y., Liu, Y., and Vore, M. Expression of an epidermal keratin protein in liver of transgenic mice causes structural and functional abnormalities. 128:157.

Alberts, B. *See* Oegema, Whitfield, and Alberts.

Alberts, B. M. *See* Field and Alberts.

— *See* Moritz, Braunfeld, Fung, Sedat, Alberts, and Agard.

Albrecht, R. *See* Fässler, Pfaff, Murphy, Noegel, Johansson, Timpl, and Albrecht.

Alderton, J. M. *See* Bi, Alderton, and Steinhardt.

Alemà, S. *See* Castellani, Reedy, Gauzzi, Provenzano, Alemà, and Falcone.

Algrain, M. *See* Martin, Andréoli, Sahuquet, Montcourrier, Algrain, and Mangeat.

Alitalo, K. *See* Mustonen and Alitalo.

— *See* Västrik, Kaipainen, Penttilä, Lymboussakis, Alitalo, Parvinen, and Alitalo.

Alitalo, R. *See* Västrik, Kaipainen, Penttilä, Lymboussakis, Alitalo, Parvinen, and Alitalo.

Allan, V. Protein phosphatase 1 regulates the cytoplasmic dynein-driven formation of endoplasmic reticulum networks in vitro. 128:879.

Allet, B. *See* Martinou, Fernandez, Missotten, White, Allet, Sadoul, and Martinou.

Allinquant, B., Hantraye, P., Mailleux, P., Moya, K., Bouillot, C., and Prochiantz, A. Downregulation of amyloid precursor protein inhibits neurite outgrowth in vitro. 128:919.

Alm, R. A. *See* Marsh, Alm, McIntosh, and James.

Alon, R., Kassner, P. D., Carr, M. W., Finger, E. B., Hemler, M. E., and Springer, T. A. The integrin VLA-4 supports tethering and rolling in flow on VCAM-1. 128:1243.

— *See* Diamond, Alon, Parkos, Quinn, and Springer.

Alonso, S. *See* Kelly, Alonso, Tajbakhsh, Cossu, and Buckingham.

Alpern, R. J. *See* Franch, Shay, Alpern, and Preisig.

Altermatt, H. J. *See* Feng, Marti, Jehn, Altermatt, Chicaiza, and Jaggi.

Altevogt, P. *See* Ruppert, Aigner, Hubbe, Yagita, and Altevogt.

Altieri, D. C. *See* Li, Xie, Kantor, Koistinen, Altieri, Nortamo, and Gahmberg.

Amberg, D. C. *See* Heath, Copeland, Amberg, Del Priore, Snyder, and Cole.

Amini, S. *See* Haas, Thatikunta, Steplewski, Johnson, Khalili, and Amini.

Anand-Apte, B. *See* Kundra, Anand-Apte, Feig, and Zetter.

Andermarcher, E. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.

Andersen, S. S. L., Buendia, B., Domínguez, J. E., Sawyer, A., and Karsenti, E. Effect on microtubule dynamics of XMAP230, a microtubule-associated protein present in *Xenopus laevis* eggs and dividing cells: Correction. 128:991.

Anderson, K. *See* Small, Herzog, and Anderson.

Anderson, R. A. *See* Gross, Hoffman, Fisette, Baas, and Anderson.

Anderson, R. G. W. *See* Conrad, Smart, Ying, Anderson, and Bloom.

— *See* Smart, Ying, and Anderson.

Andersson-Fisone, C. *See* Marrs, Andersson-Fisone, Jeong, Cohen-Gould, Zurzolo, Nabi, Rodriguez-Boulan, and Nelson.

Andreasen, P. A. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.

Andreassen, P. R. *See* Martineau, Andreassen, and Margolis.

Andréoli, C. *See* Martin, Andréoli, Sahuquet, Montcourrier, Algrain, and Mangeat.

Andrews, N. W. *See* Rodríguez, Rioult, Ora, and Andrews.

Andries, M. *See* Yamashita, ten Dijke, Huylebroeck, Sampath, Andries, Smith, Heldin, and Miyazono.

Anné, U. K. *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.

Antony, C., Huchet, M., Changeux, J.-P., and Cartaud, J. Developmental regulation of membrane traffic organization during synaptogenesis in mouse diaphragm muscle. 130:959.

Apel, K. *See* Reinbothe, Reinbothe, Runge, and Apel.

Arber, S., and Caroni, P. Thrombospondin-4, an extracellular matrix protein expressed in the developing and adult nervous system promotes neurite outgrowth. 131:1083.

Arenas, E. *See* Timmusk, Lendahl, Funakoshi, Arenas, Persson, and Metsis.

— *See* Trupp, Rydén, Jörnvall, Funakoshi, Timmusk, Arenas, and Ibáñez.

Argraves, W. S. *See* Godyna, Liau, Popa, Stefansson, and Argraves.

Aridor, M., Bannykh, S. I., Rowe, T., and Balch, W. E. Sequential coupling between CopII and CopI vesicle coats in endoplasmic reticulum to Golgi transport. 131:875.

Arizzi, M. *See* Gnessi, Emidi, Jannini, Carosa, Maroder, Arizzi, Ulisse, and Spera.

Armeanu, S., Bühring, H.-J., Reuss-Borst, M., Müller, C. A., and Klein, G. E-cadherin is functionally involved in the maturation of the erythroid lineage. 131:243.

Arnal, I. *See* Hyman, Chrétien, Arnal, and Wade.

Arneson, L. S., and Miller, J. Efficient endosomal localization of major histocompatibility complex class II–invariant chain complexes requires multimerization of the invariant chain targeting sequence. 129:1217.
Arpin, M. *See* Adam, Arpin, Prévost, Gounon, and Sansonetti.
Arribas, J., and Massagué, J. Transforming growth factor-α and β-amyloid precursor protein share a secretory mechanism. 128:433.
Artavanis-Tsakonas, S. *See* Dawson, Roth, and Artavanis-Tsakonas.
Aruffo, A. *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.
— *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.
Arvan, P. *See* Kim and Arvan.
Atkinson, S. J. *See* Kelleher, Atkinson, and Pollard.
Attaran, A. *See* Todorov, Attaran, and Kearsey.
Auran, J. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Auvinen, P. *See* Eaton, Auvinen, Luo, Jan, and Simons.
Avraham, D. *See* Taraboulos, Scott, Semenov, Avraham, Laszlo, and Prusiner.
Ayalon, O. *See* Lampugnani, Corada, Caveda, Breviario, Ayalon, Geiger, and Dejana.
Ayme-Southgate, A., Southgate, R., Saide, J., Benian, G. M., and Pardue, M. L. Both synchronous and asynchronous muscle isoforms of projectin (the Drosophila bent locus product) contain functional kinase domains. 128:393.

B

Baas, P. *See* Gross, Hoffman, Fisette, Baas, and Anderson.
Baas, P. W. *See* Sharp, Yu, and Baas.
Baba, T. *See* Damke, Baba, van der Bliek, and Schmid.
Babior, B. M. *See* Shattil, O'Toole, Eigenthaler, Thon, Williams, Babior, and Ginsberg.
Bach, T. L. *See* Chalupowicz, Chowdhury, Bach, Barsigian, and Martinez.
Bachmann, F. *See* Piali, Hammel, Uherek, Bachmann, Gisler, Dunon, and Imhof.
Bagget, M. *See* Pellman, Bagget, Tu, and Fink.
Bähler, M. *See* Stöffler, Ruppert, Reinhard, and Bähler.
Bailey, N. *See* Streuli, Schmidhauser, Bailey, Yurchenco, Skubitz, Roskelley, and Bissell.
Baines, I. C., Corigliano-Murphy, A., and Korn, E. D. Quantification and localization of phosphorylated myosin I isoforms in *Acanthamoeba castellanii*. 130:591.
Bainton, D. F. *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.
Baird, A. *See* Hanneken, Maher, and Baird.
Baker, S. E. *See* Hopkinson, Baker, and Jones.
Balasubramanian, M. K. *See* McCollum, Balasubramanian, Pelcher, Hemmingsen, and Gould.
Balch, W. E. *See* Aridor, Bannykh, Rowe, and Balch.
— *See* Brown, DeWald, Emr, Plutner, and Balch.
Balczon, R., Bao, L., Zimmer, W. E., Brown, K., Zinkowski, R. P., and Brinkley, B. R. Dissociation of centrosome replication events from cycles of DNA synthesis and mitotic division in hydroxyurea-arrested Chinese hamster ovary cells. 130:105.
Ball, W. J., Jr. *See* Lewis Carl, Felix, Caswell, Brandt, Ball, Vaghy, Meissner, and Ferguson.
Balsamo, J., Ernst, H., Zanin, M. K. B., Hoffman, S., and Lilien, J. The interaction of the retina cell surface *N*-acetylgalactosaminyl-phosphotransferase with an endogenous proteoglycan ligand results in inhibition of cadherin-mediated adhesion. 129:1391.
Bank, I. *See* Langholz, Röckel, Mauch, Kozlowska, Bank, Krieg, and Eckes.
Bankaitis, V. A. *See* Mayinger, Bankaitis, and Meyer.
Bannykh, S. I. *See* Aridor, Bannykh, Rowe, and Balch.
Bantle, S. *See* von Arx, Bantle, Soldati, and Perriard.
Bao, L. *See* Balczon, Bao, Zimmer, Brown, Zinkowski, and Brinkley.
Baraban, J. M. *See* Lin, Lee, Narayanan, Baraban, Hardwick, and Ratan.
Barrell, B. G. *See* Drees, Brown, Barrell, and Bretscher.
Barsigian, C. *See* Chalupowicz, Chowdhury, Bach, Barsigian, and Martinez.
Barth, B.-U., Wahlberg, J. M., and Garoff, H. The oligomerization reaction of the Semliki Forest virus membrane protein subunits. 128:283.
Bartolazzi, A. *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.
Bartoszewicz, Z. *See* Bö, Quarles, Fujita, Bartoszewicz, Sato, and Trapp.
Basolo, F. *See* Merlo, Basolo, Fiore, Duboc, and Hynes.
Bassham, D. C. *See* Matsuoka, Bassham, Raikhel, and Nakamura.
Bastianutto, C., Clementi, E., Codazzi, F., Podini, P., De Giorgi, F., Rizzuto, R., Meldolesi, J., and Pozzan, T. Overexpression of calreticulin increases the Ca^{2+} capacity of rapidly exchanging Ca^{2+} stores and reveals aspects of their lumenal microenvironment and function. 130:847.
Bastmeyer, M., Ott, H., Leppert, C. A., and Stuermer, C. A. O. Fish E587 glycoprotein, a member of the L1 family of cell adhesion molecules, participates in axonal fasciculation and the age-related order of ganglion cell axons in the goldfish retina. 130:969.
Bauer, R. E. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Beauvais, A., Erickson, C. A., Goins, T., Craig, S. E., Humphries, M. J., Thiery, J. P., and Dufour, S. Changes in the fibronectin-specific integrin expression pattern modify the migratory behavior of sarcoma S180 cells in vitro and in the embryonic environment. 128:699.
Beck, T. *See* Wang, Millan, Cox, Der, Rapp, Beck, Zha, and Reed.
Bednar, J., Horowitz, R. A., Dubochet, J., and Woodcock, C. L. Chromatin conformation and salt-induced compaction: Three-dimensional structural information from cryoelectron microscopy. 131:1365.
Beech, P. L. *See* Kozminski, Beech, and Rosenbaum.
Bègue, B. *See* Benmerah, Gagnon, Bègue, Mégarbané, Dautry-Varsa, and Cerf-Bensussan.
Behrens, J. *See* Takeda, Nagafuchi, Yonemura, Tsukita, Behrens, Birchmeier, and Tsukita.
Bell, J. I. *See* Jackson, Bell, Dickinson, Timans, Shields, and Whittle.
Bellavia, D. *See* Screpanti, Scarpa, Meco, Bellavia, Stuppia, Frati, Modesti, and Gulino.
Bellini, M., Lacroix, J.-C., and Gall, J. G. A zinc-binding domain is required for targeting the maternal nuclear protein PwA33 to lampbrush chromosome loops. 131:563.
Bencsath, F. A. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Bender, J. R. *See* Pfau, Leitenberg, Rinder, Smith, Pardi, and Bender.
Benfenati, F. *See* Ceccaldi, Grohovaz, Benfenati, Chieregatti, Greengard, and Valtorta.
Benghezal, M., Lipke, P. N., and Conzelmann, A. Identification of six complementation classes involved in the biosynthesis of glycosylphosphatidylinositol anchors in *Saccharomyces cerevisiae*. 130:1333.
Benian, G. M. *See* Ayme-Southgate, Southgate, Saide, Benian, and Pardue.
Benlimame, N., Simard, D., and Nabi, I. R. Autocrine motility factor receptor is a marker for a distinct membranous tubular organelle. 129:459.
Benmerah, A., Gagnon, J., Bègue, B., Mégarbané, B., Dautry-Varsa, A., and Cerf-Bensussan, N. The tyrosine kinase substrate eps15 is constitutively associated with the plasma membrane adaptor AP-2. 131:1831.
Bennett, K. L., Jackson, D. G., Simon, J. C., Tanczos, E., Peach, R., Modrell, B., Stamenkovic, I., Plowman, G., and Aruffo, A. CD44 isoforms containing exon V3 are responsible for the presentation of heparin-binding growth factor. 128:687.
—, **Modrell, B., Greenfield, B., Bartolazzi, A., Stamenkovic, I., Peach, R., Jackson, D. G., Spring, F., and Aruffo, A.** Regulation of CD44 binding to hyaluronan by glycosylation of variably spliced exons. 131:1623.
Bennett, V. *See* Hu, Moorthy, and Bennett.
Bentley Lawrence, J. *See* Xing, Johnson, Moen, McNeil, and Bentley Lawrence.
Berryman, M., Gary, R., and Bretscher, A. Ezrin oligomers are major cytoskeletal components of placental microvilli: A proposal for their involvement in cortical morphogenesis. 131:1231.
Berta, P. *See* Poulat, Girard, Chevron, Gozé, Rebillard, Calas, Lamb, and Berta.

Berthiaume, E. P., Medina, C., and Swanson, J. A. Molecular size-fractionation during endocytosis in macrophages. 129:989.
Bertolaet, B. L. *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.
Beyer, E. C. *See* Koval, Geist, Westphale, Kemendy, Civitelli, Beyer, and Steinberg.
Bi, G.-Q., Alderton, J. M., and Steinhardt, R. A. Calcium-regulated exocytosis is required for cell membrane resealing. 131:1747.
Bikfalvi, A., Klein, S., Pintucci, G., Quarto, N., Mignatti, P., and Rifkin, D. B. Differential modulation of cell phenotype by different molecular weight forms of basic fibroblast growth factor: Possible intracellular signaling by the high molecular weight forms. 129:233.
Birchmeier, C. *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Birchmeier, W. *See* Brinkmann, Foroutan, Sachs, Weidner, and Birchmeier.
— *See* Takeda, Nagafuchi, Yonemura, Tsukita, Behrens, Birchmeier, and Tsukita.
— *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Bird, I. N. *See* Fawcett, Buckley, Holness, Bird, Spragg, Saunders, Harris, and Simmons.
Birnbaum, M. J. *See* Verhey, Yeh, and Birnbaum.
Bishop, J. D. *See* Yuen, Jain, Bishop, Lindsey, Deery, Van Haastert, and Gomer.
Bissell, M. J. *See* Lin, Dempsey, Coffey, and Bissell.
— *See* Streuli, Schmidhauser, Bailey, Yurchenco, Skubitz, Roskelley, and Bissell.
Blaas, D. *See* Prchla, Plank, Wagner, Blaas, and Fuchs.
Blasi, F. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.
Blasi, J. *See* Walch-Solimena, Blasi, Edelmann, Chapman, von Mollard, and Jahn.
Blobel, G. *See* Aitchison, Blobel, and Rout.
— *See* Aitchison, Rout, Marelli, Blobel, and Wozniak.
— *See* Erdmann and Blobel.
— *See* Hurwitz and Blobel.
— *See* Strambio-de-Castillia, Blobel, and Rout.
Bloom, G. S. *See* Conrad, Smart, Ying, Anderson, and Bloom.
— *See* Lippincott-Schwartz, Cole, Marotta, Conrad, and Bloom.
— *See* Sontag, Nunbhakdi-Craig, Bloom, and Mumby.
Bloom, K. *See* Yeh, Skibbens, Cheng, Salmon, and Bloom.
Blystone, S. D., Lindberg, F. P., LaFlamme, S. E., and Brown, E. J. Integrin β_3 cytoplasmic tail is necessary and sufficient for regulation of $\alpha_5\beta_1$ phagocytosis by $\alpha_v\beta_3$ and integrin-associated protein. 130:745.
Bö, L., Quarles, R. H., Fujita, N., Bartoszewicz, Z., Sato, S., and Trapp, B. D. Endocytic depletion of L-MAG from CNS myelin in quaking mice. 131:1811.
Bohmann, K., Ferreira, J. A., and Lamond, A. I. Mutational analysis of p80 coilin indicates a functional interaction between coiled bodies and the nucleolus. 131:817.
Bohrmann, B. *See* Koch, Bohrmann, Matthison, Hagios, Trueb, and Chiquet.
Bonaccorsi, S. *See* Gunsalus, Bonaccorsi, Williams, Verni, Gatti, and Goldberg.
Bonewald, L. F. *See* Dallas, Miyazono, Skerry, Mundy, and Bonewald.
Bonifacino, J. S. *See* Marks, Roche, van Donselaar, Woodruff, Peters, and Bonifacino.
Boontrakulpoontawee, P. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Borisy, G. G. *See* Verkhovsky, Svitkina, and Borisy.
— *See* Zhai, Kronebusch, and Borisy.
Bornfeldt, K. E., Graves, L. M., Raines, E. W., Igarashi, Y., Wayman, G., Yamamura, S., Yatomi, Y., Sidhu, J. S., Krebs, E. G., Hakomori, S., and Ross, R. Sphingosine-1-phosphate inhibits PDGF-induced chemotaxis of human arterial smooth muscle cells: Spatial and temporal modulation of PDGF chemotactic signal transduction. 130:193.
Bornstein, P. Diversity of function is inherent in matricellular proteins: An appraisal of thrombospondin 1 130:503.
Borregaard, N. *See* Lollike, Borregaard, and Lindau.
Böttger, A., and Spruce, B. A. Proenkephalin is a nuclear protein responsive to growth arrest and differentiation signals. 130:1251.
Bouchard, B. *See* Vijayasaradhi, Xu, Bouchard, and Houghton.
Bouillot, C. *See* Allinquant, Hantraye, Mailleux, Moya, Bouillot, and Prochiantz.
Boukedes, S. S. *See* Owen, Campbell, Sannes, Boukedes, and Campbell.
Bowen, J. *See* Gaertig, Cruz, Bowen, Gu, Pennock, and Gorovsky.
Bowser, R. *See* Govindan, Bowser, and Novick.
Boyer, B. *See* Rodier, Vallés, Denoyelle, Thiery, and Boyer.
Brady, M. J. *See* Mastick, Brady, and Saltiel.
Brady-Kalnay, S. M., Rimm, D. L., and Tonks, N. K. Receptor protein tyrosine phosphatase PTPμ associates with cadherins and catenins in vivo. 130:977.
Brakenhoff, R. H., Gerretsen, M., Knippels, E. M. C., van Dijk, M., van Essen, H., Weghuis, D. O., Sinke, R. J., Snow, G. B., and van Dongen, G. A. M. S. The human E48 antigen, highly homologous to the murine Ly-6 antigen ThB, is a GPI-anchored molecule apparently involved in keratinocyte cell–cell adhesion. 129:1677.
Brandt, N. R. *See* Lewis Carl, Felix, Caswell, Brandt, Ball, Vaghy, Meissner, and Ferguson.
Brandt, R., Léger, J., and Lee, G. Interaction of tau with the neural plasma membrane mediated by tau's amino-terminal projection domain. 131:1327.
Branton, D. *See* Deng, Lee, Goldstein, and Branton.
Braun, R. E. *See* Schumacher, Lee, Edelhoff, and Braun.
Braunfeld, M. B. *See* Moritz, Braunfeld, Fung, Sedat, Alberts, and Agard.
Bregman, D. B., Du, L., van der Zee, S., and Warren, S. L. Transcription-dependent redistribution of the large subunit of RNA polymerase II to discrete nuclear domains. 129:287.
Brenner, H. R. *See* Kues, Brenner, Sakmann, and Witzemann.
Breton, M. *See* Guinebault, Payrastre, Racaud-Sultan, Mazarguil, Breton, Mauco, Plantavid, and Chap.
Bretscher, A. *See* Berryman, Gary, and Bretscher.
— *See* Drees, Brown, Barrell, and Bretscher.
— *See* Harsay and Bretscher.
Breviario, F. *See* Lampugnani, Corada, Caveda, Breviario, Ayalon, Geiger, and Dejana.
Brewer, C. B. *See* Naim, Dodds, Brewer, and Roth.
Briggs, K. K., Silvers, A. J., Johansen, K. M., and Johansen, J. Calsensin: A novel calcium-binding protein expressed in a subset of peripheral leech neurons fasciculating in a single axon tract. 129:1355.
Brinkley, B. R. *See* Balczon, Bao, Zimmer, Brown, Zinkowski, and Brinkley.
Brinkmann, V., Foroutan, H., Sachs, M., Weidner, K. M., and Birchmeier, W. Hepatocyte growth factor/scatter factor induces a variety of tissue-specific morphogenic programs in epithelial cells. 131:1573.
Brooks, P. C. *See* Filardo, Brooks, Deming, Damsky, and Cheresh.
Brophy, P. J. *See* Fannon, Sherman, Ilyina-Gragerova, Brophy, Friedrich, and Colman.
Brown, C. *See* Drees, Brown, Barrell, and Bretscher.
Brown, E. J. *See* Blystone, Lindberg, LaFlamme, and Brown.
Brown, J. L. *See* Lu, Montijn, Brown, Klis, Kurjan, Bussey, and Lipke.
Brown, K. *See* Balczon, Bao, Zimmer, Brown, Zinkowski, and Brinkley.
Brown, W. J., DeWald, D. B., Emr, S. D., Plutner, H., and Balch, W. E. Role for phosphatidylinositol 3-kinase in the sorting and transport of newly synthesized lysosomal enzymes in mammalian cells. 130:781.
Bruckner-Tuderman, L., Nilssen, Ø., Zimmermann, D. R., Dours-Zimmermann, M. T., Kalinke, D. U., Gedde-Dahl, T., Jr., and Winberg, J.-O. Immunohistochemical and mutation analyses demonstrate that procollagen VII is processed to collagen VII through removal of the NC-2 domain. 131:551.
Bruehl, R. E. *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.
Brümmendorf, T. *See* Nörenberg, Hubert, Brümmendorf, Tárnok, and Rathjen.
Büchler, M. *See* Mayer, Kartenbeck, Büchler, Jedlitschky, Leier, and Keppler.
Buchstaller, A. *See* Suter, Pollerberg, Buchstaller, Giger, Dreyer, and Sonderegger.
Buckingham, M. *See* Kelly, Alonso, Tajbakhsh, Cossu, and Buckingham.
Buckley, C. *See* Fawcett, Buckley, Holness, Bird, Spragg, Saunders, Harris, and Simmons.

Buendia, B. *See* Andersen, Buendia, Domínguez, Sawyer, and Karsenti.
Bühring, H.-J. *See* Armeanu, Bühring, Reuss-Borst, Müller, and Klein.
Bulinski, J. C. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.
Burbelo, P. D. *See* Miyamoto, Teramoto, Coso, Silvio Gutkind, Burbelo, Akiyama, and Yamada.
Burgess, R. *See* Staudinger, Zhou, Burgess, Elledge, and Olson.
Burghardt, T. P. *See* Roettger, Rentsch, Hadac, Hellen, Burghardt, and Miller.
Burgoon, M. P., Hazan, R. B., Phillips, G. R., Crossin, K. L., Edelman, G. M., and Cunningham, B. A. Functional analysis of post-translational cleavage products of the neuron–glia cell adhesion molecule, Ng-CAM. 130:733.
Burgoyne, R. D. *See* Chamberlain, Roth, Morgan, and Burgoyne.
Burns, C. G., Reedy, M., Heuser, J., and De Lozanne, A. Expression of light meromyosin in *Dictyostelium* blocks normal myosin II function. 130:605.
Burridge, K. *See* Kinch, Clark, Der, and Burridge.
Buss, F., and Stewart, M. Macromolecular interactions in the nucleoporin p62 complex of rat nuclear pores: Binding of nucleoporin p54 to the rod domain of p62. 128:251.
Bussey, H. *See* Lu, Montijn, Brown, Klis, Kurjan, Bussey, and Lipke.
— *See* Lussier, Sdicu, Ketela, and Bussey.
Butterweck, A. *See* Elfgang, Eckert, Lichtenberg-Fraté, Butterweck, Traub, Klein, Hülser, and Willecke.
Byard, E. H. *See* Robinson, Sherwin, Ploubidou, Byard, and Gull.
Byeon, M. K., Sugi, Y., Markwald, R. R., and Hoffman, S. NCAM polypeptides in heart development: Association with Z Discs of forms that contain the muscle-specific domain. 128:209.
Byrne, M. *See* Liu, Wu, Byrne, Jeffrey, Krane, and Jaenisch.

C

Calas, B. *See* Poulat, Girard, Chevron, Gozé, Rebillard, Calas, Lamb, and Berta.
Campbell, E. J. *See* Owen, Campbell, Sannes, Boukedes, and Campbell.
Campbell, K. P. *See* Cohen, Jacobson, Godfrey, Campbell, and Carbonetto.
— *See* Durbeej, Larsson, Ibraghimov-Beskrovnaya, Roberds, Campbell, and Ekblom.
Campbell, M. A. *See* Owen, Campbell, Sannes, Boukedes, and Campbell.
Campbell, M. S., and Gorbsky, G. J. Microinjection of mitotic cells with the 3F3/2 anti-phosphoepitope antibody delays the onset of anaphase. 129:1195.
Campenot, R. B. *See* Posse de Chaves, Vance, Campenot, and Vance.
Cao, L.-G. *See* Jacobson, Cao, Wang, and Pederson.
Capell, A. *See* Haass, Koo, Capell, Teplow, and Selkoe.
Caplow, M., Ruhlen, R. L., and Shanks, J. The free energy for hydrolysis of a microtubule-bound nucleotide triphosphate is near zero: All of the free energy for hydrolysis is stored in the microtubule lattice: Correction. 129:549.
Carbonetto, S. *See* Cohen, Jacobson, Godfrey, Campbell, and Carbonetto.
Carlier, M.-F. *See* Marchand, Moreau, Paoletti, Cossart, Carlier, and Pantaloni.
Carlson, B. M. *See* Adams, Carlson, Henderson, and Goldman.
Carmo-Fonseca, M. *See* Carvalho, Seeler, Öhman, Jordan, Pettersson, Akusjärvi, Carmo-Fonseca, and Dejean.
Carnes, D. K. *See* McCormick, Hofman, Kim, Carnes, Miller, and Madara.
Carone, R. L. *See* Strutz, Okada, Lo, Danoff, Carone, Tomaszewski, and Neilson.
Caroni, P. *See* Aigner and Caroni.
— *See* Arber and Caroni.
Carosa, E. *See* Gnessi, Emidi, Jannini, Carosa, Maroder, Arizzi, Ulisse, and Spera.
Carr, M. W. *See* Alon, Kassner, Carr, Finger, Hemler, and Springer.
Cartaud, J. *See* Antony, Huchet, Changeux, and Cartaud.
Carvalho, T., Seeler, J.-S., Öhman, K., Jordan, P., Pettersson, U., Akusjärvi, G., Carmo-Fonseca, M., and Dejean, A. Targeting of adenovirus E1A and E4-ORF3 proteins to nuclear matrix–associated PML bodies. 131:45.
Casoria-Scott, L. A. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Castellani, L., Reedy, M. C., Gauzzi, M. C., Provenzano, C., Alemà, S., and Falcone, G. Maintenance of the differentiated state in skeletal muscle: activation of v-Src disrupts sarcomeres in quail myotubes. 130:871.
Castellino, F., Ono, S., Matsumura, F., and Luini, A. Essential role of caldesmon in the actin filament reorganization induced by glucocorticoids. 131:1223.
Castillo, M. *See* Laird, Castillo, and Kasprzak.
Caswell, A. H. *See* Lewis Carl, Felix, Caswell, Brandt, Ball, Vaghy, Meissner, and Ferguson.
Catsicas, S. *See* Sadoul, Lang, Montecucco, Weller, Regazzi, Catsicas, Wollheim, and Halban.
Caveda, L. *See* Lampugnani, Corada, Caveda, Breviario, Ayalon, Geiger, and Dejana.
Cazzulo, J. J. *See* Labriola, Cazzulo, and Parodi.
Ceccaldi, P.-E., Grohovaz, F., Benfenati, F., Chieregatti, E., Greengard, P., and Valtorta, F. Dephosphorylated synapsin I anchors synaptic vesicles to actin cytoskeleton: An analysis by videomicroscopy. 128:905.
Cech, T. R. *See* Fang and Cech.
Cerf-Bensussan, N. *See* Benmerah, Gagnon, Bègue, Mégarbané, Dautry-Varsa, and Cerf-Bensussan.
Chait, B. T. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Chalupowicz, D. G., Chowdhury, Z. A., Bach, T. L., Barsigian, C., and Martinez, J. Fibrin II induces endothelial cell capillary tube formation. 130:207.
Chamberlain, L. H., Roth, D., Morgan, A., and Burgoyne, R. D. Distinct effects of α-SNAP, 14-3-3 proteins, and calmodulin on priming and triggering of regulated exocytosis. 130:1063.
Chan, A. S. H. *See* Shimizu, Mobley, Finkelstein, and Chan.
Chandrasekhar, A. *See* Shutt, Wessels, Wagenknecht, Chandrasekhar, Hitt, Luna, and Soll.
Chang, A., and Fink, G. R. Targeting of the yeast plasma membrane [H^+]ATPase: A novel gene *AST1* prevents mislocation of mutant ATPase to the vacuole. 128:39.
Chang, D. C., and Meng, C. A localized elevation of cytosolic free calcium is associated with cytokinesis in the zebrafish embryo. 131:1539.
Chang, J. *See* Kruth, Skarlatos, Lilly, Chang, and Ifrim.
Chang, J.-H., Gill, S., Settleman, J., and Parsons, S. J. c-Src regulates the simultaneous rearrangement of actin cytoskeleton, p190RhoGAP, and p120RasGAP following epidermal growth factor stimulation. 130:355.
Changeux, J.-P. *See* Antony, Huchet, Changeux, and Cartaud.
Chant, J., Mischke, M., Mitchell, E., Herskowitz, I., and Pringle, J. R. Role of Bud3p in producing the axial budding pattern of yeast. 129:767.
—, **and Pringle, J. R.** Patterns of bud-site selection in the yeast *Saccharomyces cerevisiae.* 129:751.
Chap, H. *See* Guinebault, Payrastre, Racaud-Sultan, Mazarguil, Breton, Mauco, Plantavid, and Chap.
Chapman, E. R. *See* Walch-Solimena, Blasi, Edelmann, Chapman, von Mollard, and Jahn.
Chaponnier, C., Goethals, M., Janmey, P. A., Gabbiani, F., Gabbiani, G., and Vandekerckhove, J. The specific NH_2-terminal sequence Ac-EEED of α-smooth muscle actin plays a role in polymerization in vitro and in vivo. 130:887.
Charollais, A. *See* Vozzi, Ullrich, Charollais, Philippe, Orci, and Meda.
Cheah, K. S. E., Levy, A., Trainor, P. A., Wai, A. W. K., Kuffner, T., So, C. L., Leung, K. K. H., Lovell-Badge, R. H., and Tam, P. P. L. Human COL2A1-directed SV40 T antigen expression in transgenic and chimeric mice results in abnormal skeletal development. 128:223.
Chen, J. *See* Nakagawa, Chen, Zhang, Kanai, and Hirokawa.
Cheng, J. *See* Lloyd, Yu, Cheng, Turksen, Degenstein, Hutton, and Fuchs.
Cheng, J. W. *See* Yeh, Skibbens, Cheng, Salmon, and Bloom.
Cheng, L., Khan, M., and Mudge, A. W. Calcitonin gene-related peptide promotes Schwann cell proliferation. 129:789.
Cheon, H.-G. *See* LaRochelle, Dirsch, Finch, Cheon, May, Marchese, Pierce, and Aaronson.
Cheresh, D. A. *See* Filardo, Brooks, Deming, Damsky, and Cheresh.
Chevalier, S. *See* Jackson, Chevalier, Philippe, and Kirschner.

Chevron, M.-P. *See* Poulat, Girard, Chevron, Gozé, Rebillard, Calas, Lamb, and Berta.
Chi, N. C., Adam, E. J. H., and Adam, S. A. Sequence and characterization of cytoplasmic nuclear protein import factor p97. 130:265.
Chicaiza, G. *See* Feng, Marti, Jehn, Altermatt, Chicaiza, and Jaggi.
Chida, K. *See* Tagawa, Kuroki, Vogt, and Chida.
Chieregatti, E. *See* Ceccaldi, Grohovaz, Benfenati, Chieregatti, Greengard, and Valtorta.
Chilcote, T. J., Galli, T., Mundigl, O., Edelmann, L., McPherson, P. S., Takei, K., and De Camilli, P. Cellubrevin and synaptobrevins: Similar subcellular localization and biochemical properties in PC12 cells. 129:219.
— *See* Garcia, McPherson, Chilcote, Takei, and De Camilli.
Chiquet, M. *See* Koch, Bohrmann, Matthison, Hagios, Trueb, and Chiquet.
Cho, M.-S. *See* Whalley, Terasaki, Cho, and Vogel.
Chowdhury, Z. A. *See* Chalupowicz, Chowdhury, Bach, Barsigian, and Martinez.
Chrétien, D., Fuller, S. D., and Karsenti, E. Structure of growing microtubule ends: Two-dimensional sheets close into tubes at variable rates. 129:1311.
— *See* Hyman, Chrétien, Arnal, and Wade.
Christensen, E. I. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.
Chuang, J.-Z., Lin, D. C., and Lin, S. Molecular cloning, expression, and mapping of the high affinity actin-capping domain of chicken cardiac tensin. 128:1095.
Chung, C. H. *See* Kang, Shin, Song, Ha, Chung, and Kang.
Cinek, T. *See* van den Berg, Cinek, Hallett, Horejsi, and Morgan.
Civitelli, R. *See* Koval, Geist, Westphale, Kemendy, Civitelli, Beyer, and Steinberg.
Clark, G. J. *See* Kinch, Clark, Der, and Burridge.
Clarke, D. J. *See* Giménez-Abián, Clarke, Mullinger, Downes, and Johnson.
Clarke, L. *See* Marschall and Clarke.
Clegg, D. O. *See* Raichman, Panzeri, Clementi, Papazafiri, Eckley, Clegg, Villa, and Meldolesi.
Clementi, E. *See* Bastianutto, Clementi, Codazzi, Podini, De Giorgi, Rizzuto, Meldolesi, and Pozzan.
— *See* Raichman, Panzeri, Clementi, Papazafiri, Eckley, Clegg, Villa, and Meldolesi.
Cleveland, D. W. *See* Wong, Marszalek, Crawford, Xu, Hsieh, Griffin, and Cleveland.
Clift-O'Grady, L. *See* Desnos, Clift-O'Grady, and Kelly.
Cockell, M., Palladino, F., Laroche, T., Kyrion, G., Liu, C., Lustig, A. J., and Gasser, S. M. The carboxy termini of Sir4 and Rap1 affect Sir3 localization: Evidence for a multicomponent complex required for yeast telomeric silencing. 129:909.
Codazzi, F. *See* Bastianutto, Clementi, Codazzi, Podini, De Giorgi, Rizzuto, Meldolesi, and Pozzan.
— *See* Lorenzon, Zacchetti, Codazzi, Fumagalli, Meldolesi, and Grohovaz.
Coffey, R. J. *See* Lin, Dempsey, Coffey, and Bissell.
Cohen, F. S. *See* Melikyan, White, and Cohen.
Cohen, M. W., Jacobson, C., Godfrey, E. W., Campbell, K. P., and Carbonetto, S. Distribution of α-dystroglycan during embryonic nerve–muscle synaptogenesis. 129:1093.
Cohen-Gould, L. *See* Marrs, Andersson-Fisone, Jeong, Cohen-Gould, Zurzolo, Nabi, Rodriguez-Boulan, and Nelson.
Cole, C. N. *See* Gorsch, Dockendorff, and Cole.
— *See* Heath, Copeland, Amberg, Del Priore, Snyder, and Cole.
Cole, N. B. *See* Lippincott-Schwartz, Cole, Marotta, Conrad, and Bloom.
Cole, R. W. *See* Rieder, Cole, Khodjakov, and Sluder.
Collins, P. G. *See* Silberstein, Collins, Kelleher, and Gilmore.
— *See* Silberstein, Collins, Kelleher, Rapiejko, and Gilmore.
Colman, D. R. *See* Doyle, Stempak, Cowin, Colman, and D'Urso.
— *See* Fannon, Sherman, Ilyina-Gragerova, Brophy, Friedrich, and Colman.
Compton, D. A. *See* Gaglio, Saredi, and Compton.
Conboy, J. G. *See* Discher, Winardi, Schischmanoff, Parra, Conboy, and Mohandas.
Condeelis, J. *See* Cox, Ridsdale, Condeelis, and Hartwig.
Conese, M., Nykjaer, A., Petersen, C. M., Cremona, O., Pardi, R., Andreasen, P. A., Gliemann, J., Christensen, E. I., and Blasi, F. α_2 Macroglobulin receptor/Ldl receptor-related protein(Lrp)-dependent internalization of the urokinase receptor. 131:1609.
Conibear, E. *See* Nothwehr, Conibear, and Stevens.
Conrad, P. A., Smart, E. J., Ying, Y.-S., Anderson, R. G. W., and Bloom, G. S. Caveolin cycles between plasma membrane caveolae and the Golgi complex by microtubule-dependent and microtubule-independent steps. 131:1421.
— *See* Lippincott-Schwartz, Cole, Marotta, Conrad, and Bloom.
Constable, C. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.
Conti, A. *See* Giannini, Conti, Mammarella, Scrobogna, and Sorrentino.
Conzelmann, A. *See* Benghezal, Lipke, and Conzelmann.
Cooper, A. A. *See* Piper, Cooper, Yang, and Stevens.
Cooper, J. A. *See* Karpova, Tatchell, and Cooper.
— *See* Schafer, Hug, and Cooper.
Copeland, C. S. *See* Heath, Copeland, Amberg, Del Priore, Snyder, and Cole.
Coppolino, M. *See* Demetriou, Nabi, Coppolino, Dedhar, and Dennis.
Corada, M. *See* Lampugnani, Corada, Caveda, Breviario, Ayalon, Geiger, and Dejana.
Corbett, A. H., Koepp, D. M., Schlenstedt, G., Lee, M. S., Hopper, A. K., and Silver, P. A. Rnalp, a Ran/TC4 GTPase activating protein, is required for nuclear import. 130:1017.
Corfas, G. *See* Goodearl, Yee, Sandrock, Corfas, and Fischbach.
Corigliano-Murphy, A. *See* Baines, Corigliano-Murphy, and Korn.
Coso, O. A. *See* Miyamoto, Teramoto, Coso, Silvio Gutkind, Burbelo, Akiyama, and Yamada.
Cossart, P. *See* Marchand, Moreau, Paoletti, Cossart, Carlier, and Pantaloni.
Cosson, P. *See* Letourneur, Hennecke, Démollière, and Cosson.
Cossu, G. *See* Kelly, Alonso, Tajbakhsh, Cossu, and Buckingham.
Cotliar, A. M. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mitti, and Smith.
Courtney, I. *See* Spang, Courtney, Grein, Matzner, and Schiebel.
Cowin, P. *See* Doyle, Stempak, Cowin, Colman, and D'Urso.
Cox, A. D. *See* Wang, Milian, Cox, Der, Rapp, Beck, Zha, and Reed.
Cox, D., Ridsdale, J. A., Condeelis, J., and Hartwig, J. Genetic deletion of ABP-120 alters the three-dimensional organization of actin filaments in *Dictyostelium* pseudopods. 128:819.
Crabtree, G. R. *See* Fanger, Hoth, Crabtree, and Lewis.
Craig, J. *See* Slack, Skerjanc, Lach, Craig, Jardine, and McBurney.
Craig, R. W. *See* Yang, Kozopas, and Craig.
Craig, S. E. *See* Beauvais, Erickson, Goins, Craig, Humphries, Thiery, and Dufour.
Cramer, L. P., and Mitchison, T. J. Myosin is involved in postmitotic cell spreading. 131:179.
Crawford, T. O. *See* Wong, Marszalek, Crawford, Xu, Hsieh, Griffin, and Cleveland.
Cregg, J. M. *See* Tan, Waterham, Veenhuis, and Cregg.
Cremona, O. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.
Crossin, K. L. *See* Burgoon, Hazan, Phillips, Crossin, Edelman, and Cunningham.
Crowley, E., and Horwitz, A. F. Tyrosine phosphorylation and cytoskeletal tension regulate the release of fibroblast adhesions. 131:525.
Cruz, M. A. *See* Gaertig, Cruz, Bowen, Gu, Pennock, and Gorovsky.
Cullen, T. *See* Spinardi, Einheber, Cullen, Milner, and Giancotti.
Cummings, R. D. *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.
Cunningham, B. A. *See* Burgoon, Hazan, Phillips, Crossin, Edelman, and Cunningham.
Cunningham, C. C. Actin polymerization and intracellular solvent flow in cell surface blebbing. 129:1589.
Cutler, D. F. *See* Stinchcombe, Nomoto, Cutler, and Hopkins.

D

Dadabay, C. Y. *See* Lorenzen, Dadabay, and Fischer.
Dallas, S. L., Miyazono, K., Skerry, T. M., Mundy, G. R., and Bonewald, L. F. Dual role for the latent transforming growth factor-β binding protein in storage of latent TGF-β in the extracellular matrix and as a structural matrix protein. 131:539.
Damke, H., Baba, T., van der Bliek, A. M., and Schmid, S. L. Clathrin-independent pinocytosis is induced in cells overexpressing a temperature-sensitive mutant of dynamin. 131:69.

Damsky, C. *See* Filardo, Brooks, Deming, Damsky, and Cheresh.
Damsky, C. H. *See* Huhtala, Humphries, McCarthy, Tremble, Werb, and Damsky.
— *See* Tremble, Damsky, and Werb.
Daneholt, B. *See* Mehlin, Daneholt, and Skoglund.
Danielsen, E. M., and van Deurs, B. A transferrin-like GPI-linked iron-binding protein in detergent-insoluble noncaveolar microdomains at the apical surface of fetal intestinal epithelial cells. 131:939.
Danoff, T. *See* Strutz, Okada, Lo, Danoff, Carone, Tomaszewski, and Neilson.
Danpure, C. J. *See* Motley, Lumb, Oatey, Jennings, De Zoysa, Wanders, Tabak, and Danpure.
Dauguet, C. *See* Petit, Lecoeur, Zorn, Dauguet, Mignotte, and Gougeon.
Dautry-Varsa, A. *See* Benmerah, Gagnon, Bègue, Mégarbané, Dautry-Varsa, and Cerf-Bensussan.
Dautry-Varsat, A. *See* Hémar, Subtil, Lieb, Morelon, Hellio, and Dautry-Varsat.
Davidson, H. W. Wortmannin causes mistargeting of procathepsin D. Evidence for the involvement of a phosphatidylinositol 3-kinase in vesicular transport to lysosomes. 130:797.
Davies, A. M. *See* Wyatt and Davies.
Davis, F. E. *See* Albers, Davis, Perrone, Lee, Liu, and Vore.
Dawson, I. A., Roth, S., and Artavanis-Tsakonas, S. The *Drosophila* cell cycle gene *fizzy* is required for normal degradation of cyclins A and B during mitosis and has homology to the *CDC20* gene of *Saccharomyces cerevisiae*. 129:725.
DeBlasio, A. *See* Fan, Lu, Wu, DeBlasio, Koff, and Mendelsohn.
De Camilli, P. *See* Chilcote, Galli, Mundigl, Edelmann, McPherson, Takei, and De Camilli.
— *See* Garcia, McPherson, Chilcote, Takei, and De Camilli.
de Crombrugghe, B. *See* Lefebvre, Garofalo, and de Crombrugghe.
— *See* Rossert, Eberspaecher, and de Crombrugghe.
Dedhar, S. *See* Demetriou, Nabi, Coppolino, Dedhar, and Dennis.
— *See* St-Arnaud, Prud'homme, Leung-Hagesteijn, and Dedhar.
Deery, W. J. *See* Yuen, Jain, Bishop, Lindsey, Deery, Van Haastert, and Gomer.
Degenstein, L. *See* Lloyd, Yu, Cheng, Turksen, Degenstein, Hutton, and Fuchs.
De Giorgi, F. *See* Bastianutto, Clementi, Codazzi, Podini, De Giorgi, Rizzuto, Meldolesi, and Pozzan.
de Hoop, M., von Poser, C., Lange, C., Ikonen, E., Hunziker, W., and Dotti, C. G. Intracellular routing of wild-type and mutated polymeric immunoglobulin receptor in hippocampal neurons in culture. 130:1447.
Dejana, E. *See* Lampugnani, Corada, Caveda, Breviario, Ayalon, Geiger, and Dejana.
Dejean, A. *See* Carvalho, Seeler, Öhman, Jordan, Pettersson, Akusjärvi, Carmo-Fonseca, and Dejean.
De Lozanne, A. *See* Burns, Reedy, Heuser, and De Lozanne.
del Pozo, M. A., Sánchez-Mateos, P., Nieto, M., and Sánchez-Madrid, F. Chemokines regulate cellular polarization and adhesion receptor redistribution during lymphocyte interaction with endothelium and extracellular matrix. Involvement of cAMP signaling pathway. 131:495.
Del Priore, V. *See* Heath, Copeland, Amberg, Del Priore, Snyder, and Cole.
De Luca, M. *See* Zambruno, Marchisio, Marconi, Vaschieri, Melchiori, Giannetti, and De Luca.
Demetriou, M., Nabi, I. R., Coppolino, M., Dedhar, S., and Dennis, J. W. Reduced contact-inhibition and substratum adhesion in epithelial cells expressing GlcNAc-transferase V. 130:383.
Deming, S. L. *See* Filardo, Brooks, Deming, Damsky, and Cheresh.
Demlehner, M. P., Schäfer, S., Grund, C., and Franke, W. W. Continual assembly of half-desmosomal structures in the absence of cell contacts and their frustrated endocytosis: A coordinated Sisyphus cycle. 131:745.
Démollière, C. *See* Letourneur, Hennecke, Démollière, and Cosson.
Dempsey, P. J. *See* Lin, Dempsey, Coffey, and Bissell.
Deng, H., Lee, J. K., Goldstein, L. S. B., and Branton, D. *Drosophila* development requires spectrin network formation. 128:71.
Dennis, J. W. *See* Demetriou, Nabi, Coppolino, Dedhar, and Dennis.
Denoyelle, M. *See* Rodier, Vallés, Denoyelle, Thiery, and Boyer.
Denzer, A. J., Gesemann, M., Schumacher, B., and Ruegg, M. A. An amino-terminal extension is required for the secretion of chick agrin and its binding to extracellular matrix. 131:1547.
— *See* Gesemann, Denzer, and Ruegg.
Der, C. J. *See* Kinch, Clark, Der, and Burridge.
— *See* Wang, Millan, Cox, Der, Rapp, Beck, Zha, and Reed.
Desai, A., and Mitchison, T. J. A new role for motor proteins as couplers to depolymerizing microtubules. 128:1.
Desnos, C., Clift-O'Grady, L., and Kelly, R. B. Biogenesis of synaptic vesicles in vitro. 130:1041.
Devreotes, P. N. *See* Lilly and Devreotes.
— *See* Wu, Valkema, Van Haastert, and Devreotes.
DeWald, D. B. *See* Brown, DeWald, Emr, Plutner, and Balch.
— *See* Stack, DeWald, Takegawa, and Emr.
De Zoysa, P. A. *See* Motley, Lumb, Oatey, Jennings, De Zoysa, Wanders, Tabak, and Danpure.
Diamond, M. S., Alon, R., Parkos, C. A., Quinn, M. T., and Springer, T. A. Heparin is an adhesive ligand for the leukocyte integrin Mac-1 (CD11b/CD18). 130:1473.
Dickinson, R. *See* Jackson, Bell, Dickinson, Timans, Shields, and Whittle.
Dirsch, O. R. *See* LaRochelle, Dirsch, Finch, Cheon, May, Marchese, Pierce, and Aaronson.
Discher, D. E., Winardi, R., Schischmanoff, P. O., Parra, M., Conboy, J. G., and Mohandas, N. Mechanochemistry of protein 4.1's spectrin–actin-binding domain: Ternary complex interactions, membrane binding, network integration, structural strengthening. 130:897.
Dockendorff, T. C. *See* Gorsch, Dockendorff, and Cole.
Dodds, D. T. *See* Naim, Dodds, Brewer, and Roth.
Doerschuk, C. M. *See* Pavalko, Walker, Graham, Goheen, Doerschuk, and Kansas.
Domínguez, J. E. *See* Andersen, Buendia, Domínguez, Sawyer, and Karsenti.
Donaldson, J. G. *See* Peters, Hsu, Ooi, Finazzi, Teal, Oorschot, Donaldson, and Klausner.
Donn, A. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Dorer, R., Pryciak, P. M., and Hartwell, L. H. *Saccharomyces cerevisiae* cells execute a default pathway to select a mate in the absence of pheromone gradients. 131:845.
Dotti, C. G. *See* de Hoop, von Poser, Lange, Ikonen, Hunziker, and Dotti.
Dours-Zimmermann, M. T. *See* Bruckner-Tuderman, Nilssen, Zimmermann, Dours-Zimmermann, Kalinke, Gedde-Dahl, and Winberg.
Downes, C. S. *See* Giménez-Abián, Clarke, Mullinger, Downes, and Johnson.
Doyle, J. P., Stempak, J. G., Cowin, P., Colman, D. R., and D'Urso, D. Protein zero, a nervous system adhesion molecule, triggers epithelial reversion in host carcinoma cells. 131:465.
Dragas-Granoic, S. *See* Kuriyama, Kofron, Essner, Kato, Dragas-Granoic, Omoto, and Khodjakov.
Drees, B., Brown, C., Barrell, B. G., and Bretscher, A. Tropomyosin is essential in yeast, yet the *TPM1* and *TPM2* products perform distinct functions. 128:383.
Dreyer, W. J. *See* Suter, Pollerberg, Buchstaller, Giger, Dreyer, and Sonderegger.
Dreyfuss, G. *See* Siomi and Dreyfuss.
Driessens, M. H. E., Stroeken, P. J. M., Rodriguez Erena, N. F., van der Valk, M. A., van Rijthoven, E. A. M., and Roos, E. Targeted disruption of CD44 in MDAY-D2 lymphosarcoma cells has no effect on subcutaneous growth or metastatic capacity. 131:1849.
Drubin, D. G. *See* Li, Zheng, and Drubin.
Du, L. *See* Bregman, Du, van der Zee, and Warren.
Duboc, L. *See* Merlo, Basolo, Fiore, Duboc, and Hynes.
Dubochet, J. *See* Bednar, Horowitz, Dubochet, and Woodcock.
Dufour, S. *See* Beauvais, Erickson, Goins, Craig, Humphries, Thiery, and Dufour.
Dunn, K. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Dunn, K. W. *See* van Weert, Dunn, Geuze, Maxfield, and Stoorvogel.
Dunon, D. *See* Piali, Hammel, Uherek, Bachmann, Gisler, Dunon, and Imhof.
— *See* Kadoya, Kadoya, Durbeej, Holmvall, Sorokin, and Ekblom.
Durbeej, M., Larsson, E., Ibraghimov-Beskrovnaya, O., Roberds, S. L., Campbell, K. P., and Ekblom, P. Non-muscle α-dystroglycan is involved in epithelial development. 130:79.

D'Urso, D. *See* Doyle, Stempak, Cowin, Colman, and D'Urso.
Dyer, J. M. *See* Marshall, Krimkevich, Lark, Dyer, Veenhuis, and Goodman.

E

Eaton, S., Auvinen, P., Luo, L., Jan, Y. N., and Simons, K. CDC42 and Rac1 control different actin-dependent processes in the *Drosophila* wing disc epithelium. 131:151.
Eberspaecher, H. *See* Rossert, Eberspaecher, and de Crombrugghe.
Ecke, M. *See* Segall, Kuspa, Shaulsky, Ecke, Maeda, Gaskins, Firtel, and Loomis.
Eckert, R. *See* Elfgang, Eckert, Lichtenberg-Fraté, Butterweck, Traub, Klein, Hülser, and Willecke.
Eckes, B. *See* Langholz, Röckel, Mauch, Kozlowska, Bank, Krieg, and Eckes.
Eckley, M. *See* Raichman, Panzeri, Clementi, Papazafiri, Eckley, Clegg, Villa, and Meldolesi.
Edelhoff, S. *See* Schumacher, Lee, Edelhoff, and Braun.
Edelman, G. M. *See* Burgoon, Hazan, Phillips, Crossin, Edelman, and Cunningham.
Edelmann, L. *See* Chilcote, Galli, Mundigl, Edelmann, McPherson, Takei, and De Camilli.
— *See* Walch-Solimena, Blasi, Edelmann, Chapman, von Mollard, and Jahn.
Egerton, M. *See* Hamburger, Egerton, and Riezman.
Ehlers, M. D., Kaplan, D. R., Price, D. L., and Koliatsos, V. E. NGF-stimulated retrograde transport of trkA in the mammalian nervous system. 130:149.
Eicher, E. M. *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.
Eigenthaler, M. *See* Shattil, O'Toole, Eigenthaler, Thon, Williams, Babior, and Ginsberg.
Einheber, S., Hannocks, M.-J., Metz, C. N., Rifkin, D. B., and Salzer, J. L. Transforming growth factor-β1 regulates axon/schwann cell interactions. 129:443.
— *See* Spinardi, Einheber, Cullen, Milner, and Giancotti.
Ekblom, P. *See* Durbeej, Larsson, Ibraghimov-Beskrovnaya, Roberds, Campbell, and Ekblom.
— *See* Kadoya, Kadoya, Durbeej, Holmvall, Sorokin, and Ekblom.
Elder, G. *See* Tu, Elder, Lazzarini, Nelson, Trojanowski, and Lee.
Elfgang, C., Eckert, R., Lichtenberg-Fraté, H., Butterweck, A., Traub, O., Klein, R. A., Hülser, D. F., and Willecke, K. Specific permeability and selective formation of gap junction channels in connexin-transfected HeLa cells. 129:805.
Elion, E. A., Trueheart, J., and Fink, G. R. Fus2 localizes near the site of cell fusion and is required for both cell fusion and nuclear alignment during zygote formation. 130:1283.
Elledge, S. J. *See* Staudinger, Zhou, Burgess, Elledge, and Olson.
Elson, E. L. *See* Pasternak, Wong, and Elson.
Emidi, A. *See* Gnessi, Emidi, Jannini, Carosa, Maroder, Arizzi, Ulisse, and Spera.
Emig, S. *See* Grandi, Emig, Weise, Hucho, Pohl, and Hurt.
Emr, S. D. *See* Brown, DeWald, Emr, Plutner, and Balch.
— *See* Stack, DeWald, Takegawa, and Emr.
— *See* Vida and Emr.
Enomoto-Iwamoto, M. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.
Erdmann, R., and Blobel, G. Giant peroxisomes in oleic acid–induced *Saccharomyces cerevisiae* lacking the peroxisomal membrane protein Pmp27p. 128:509.
Erdos, V. *See* Rak, Mitsuhashi, Erdos, Huang, Filmus, and Kerbel.
Erenpreisa, J. *See* Roach, Erenpreisa, and Aigner.
Erickson, C. A. *See* Beauvais, Erickson, Goins, Craig, Humphries, Thiery, and Dufour.
Ernst, H. *See* Balsamo, Ernst, Zanin, Hoffman, and Lilien.
Esch, F. S. *See* Staddon, Smales, Schulze, Esch, and Rubin.
Eshel, D. *See* Saunders, Koshland, Eshel, Gibbons, and Hoyt.
Espenshade, P., Gimeno, R. E., Holzmacher, E., Teung, P., and Kaiser, C. A. Yeast *SEC16* gene encodes a multidomain vesicle coat protein that interacts with Sec23p. 131:311.
Espy, J. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Essner, R. *See* Kuriyama, Kofron, Essner, Kato, Dragas-Granoic, Omoto, and Khodjakov.

F

Fagotto, F. *See* Funayama, Fagotto, McCrea, and Gumbiner.
Falcone, G. *See* Castellani, Reedy, Gauzzi, Provenzano, Alemà, and Falcone.
Fan, Z., Lu, Y., Wu, X., DeBlasio, A., Koff, A., and Mendelsohn, J. Prolonged induction of $p21^{Cip1/WAF1}$/CDK2/PCNA complex by epidermal growth factor receptor activation mediates ligand-induced A431 cell growth inhibition. 131:235.
Fang, G., and Cech, T. R. Telomerase RNA localized in the replication band and spherical subnuclear organelles in hypotrichous ciliates. 130:243.
Fanger, C. M., Hoth, M., Crabtree, G. R., and Lewis, R. S. Characterization of T cell mutants with defects in capacitative calcium entry: Genetic evidence for the physiological roles of CRAC channels. 131:655.
Fannon, A. M., Sherman, D. L., Ilyina-Gragerova, G., Brophy, P. J., Friedrich, V. L., Jr., and Colman, D. R. Novel E-cadherin–mediated adhesion in peripheral nerve: Schwann cell architecture is stabilized by autotypic adherens junctions. 129:189. Correction. 129:1721.
Farkasovsky, M., and Küntzel, H. Yeast Num1p associates with the mother cell cortex during S/G2 phase and affects microtubular functions. 131:1003.
Farr, A. G. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Farris, R. L. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Fässler, R., Pfaff, M., Murphy, J., Noegel, A. A., Johansson, S., Timpl, R., and Albrecht, R. Lack of β1 integrin gene in embryonic stem cells affects morphology, adhesion, and migration but not integration into the inner cell mass of blastocysts. 128:979.
Favre, B. *See* Turowski, Fernandez, Favre, Lamb, and Hemmings.
Fawcett, J., Buckley, C., Holness, C. L., Bird, I. N., Spragg, J. H., Saunders, J., Harris, A., and Simmons, D. L. Mapping the homotypic binding sites in CD31 and the role of CD31 adhesion in the formation of interendothelial cell contacts. 128:1229.
Feig, L. A. *See* Kundra, Anand-Apte, Feig, and Zetter.
Feigenson, G. W. *See* Sase, Okinaga, Hoshi, Feigenson, and Kinosita.
Feiken, E. *See* Gebbink, Zondag, Koningstein, Feiken, Wubbolts, and Moolenaar.
Felix, K. *See* Lewis Carl, Felix, Caswell, Brandt, Ball, Vaghy, Meissner, and Ferguson.
Feng, Y., Press, B., and Wandinger-Ness, A. Rab 7: An important regulator of late endocytic membrane traffic. 131:1435.
Feng, Z., Marti, A., Jehn, B., Altermatt, H. J., Chicaiza, G., and Jaggi, R. Glucocorticoid and progesterone inhibit involution and programmed cell death in the mouse mammary gland. 131:1095.
Ferguson, D. G. *See* Lewis Carl, Felix, Caswell, Brandt, Ball, Vaghy, Meissner, and Ferguson.
— *See* Sun, Protasi, Takahashi, Takeshima, Ferguson, and Franzini-Armstrong.
Fernandez, A. *See* Turowski, Fernandez, Favre, Lamb, and Hemmings.
Fernandez, P.-A. *See* Martinou, Fernandez, Missotten, White, Allet, Sadoul, and Martinou.
Fernandez, R. *See* Liao, Lowthert, Ku, Fernandez, and Omary.
Ferreira, J. A. *See* Bohmann, Ferreira, and Lamond.
Ferro-Novick, S. *See* Simons, Ferro-Novick, Rose, and Helenius.
Fiedler, K., Lafont, F., Parton, R. G., and Simons, K. Annexin XIIIb: A novel epithelial specific annexin is implicated in vesicular traffic to the apical plasma membrane. 128:1043.
Field, C. M., and Alberts, B. M. Anillin, a contractile ring protein that cycles from the nucleus to the cell cortex. 131:165.
Filardo, E. J., Brooks, P. C., Deming, S. L., Damsky, C., and Cheresh, D. A. Requirement of the NPXY motif in the integrin β3 subunit cytoplasmic tail for melanoma cell migration in vitro and in vivo. 130:441.

Filmus, J. *See* Rak, Mitsuhashi, Erdos, Huang, Filmus, and Kerbel.
Finazzi, D. *See* Peters, Hsu, Ooi, Finazzi, Teal, Oorschot, Donaldson, and Klausner.
Finch, P. W. *See* LaRochelle, Dirsch, Finch, Cheon, May, Marchese, Pierce, and Aaronson.
Fine, L. G. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.
Finger, E. B. *See* Alon, Kassner, Carr, Finger, Hemler, and Springer.
— *See* Puri, Finger, Gaudernack, and Springer.
Fink, G. R. *See* Chang and Fink.
— *See* Elion, Trueheart, and Fink.
— *See* Pellman, Bagget, Tu, and Fink.
Finkelstein, L. D. *See* Shimizu, Mobley, Finkelstein, and Chan.
Finlay, B. B. *See* Garcia-del Portillo and Finlay.
Fiore, L. *See* Merlo, Basolo, Fiore, Duboc, and Hynes.
Firmbach-Kraft, I., and Stick, R. Analysis of nuclear lamin isoprenylation in *Xenopus* oocytes: Isoprenylation of lamin B3 precedes its uptake into the nucleus. 129:17.
Firtel, R. A. *See* Segall, Kuspa, Shaulsky, Ecke, Maeda, Gaskins, Firtel, and Loomis.
Fischbach, G. D. *See* Goodearl, Yee, Sandrock, Corfas, and Fischbach.
— *See* Loeb and Fischbach.
Fischer, E. H. *See* Lorenzen, Dadabay, and Fischer.
Fischer, R., and Timberlake, W. E. *Aspergillus nidulans apsA* (anucleate primary sterigmata) encodes a coiled-coil protein required for nuclear positioning and completion of asexual development. 128:485.
Fisette, P. L. *See* Gross, Hoffman, Fisette, Baas, and Anderson.
Fisher, P. L. *See* Pittler, Fliesler, Fisher, Kennedy Keller, and Rapp.
FitzGerald, D. J., Fryling, C. M., Zdanovsky, A., Saelinger, C. B., Kounnas, M., Winkles, J. A., Strickland, D., and Leppla, S. *Pseudomonas* exotoxin–mediated selection yields cells with altered expression of low-density lipoprotein receptor–related protein. 129:1533. Correction. 130:1015.
Fliesler, S. J. *See* Pittler, Fliesler, Fisher, Kennedy Keller, and Rapp.
Forbes, D. J. *See* Meier, Miller, and Forbes.
— *See* Powers, Macaulay, Masiarz, and Forbes.
Forest, C. *See* Poliard, Nifuji, Lamblin, Plee, Forest, and Kellermann.
Foroutan, H. *See* Brinkmann, Foroutan, Sachs, Weidner, and Birchmeier.
Fortes, P. A. G. *See* Shaw, Fortes, Stout, and Vacquier.
Fowler, V. M. *See* Gregorio and Fowler.
Franch, H. A., Shay, J. W., Alpern, R. J., and Preisig, P. A. Involvement of pRB family in TGFβ-dependent epithelial cell hypertrophy. 129:245.
Francke, U. *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.
Franco, R. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Franke, W. W. *See* Demlehner, Schäfer, Grund, and Franke.
Franzini-Armstrong, C. *See* Sun, Protasi, Takahashi, Takeshima, Ferguson, and Franzini-Armstrong.
Frasch, M. *See* Küssel and Frasch.
Frati, L. *See* Screpanti, Scarpa, Meco, Bellavia, Stuppia, Frati, Modesti, and Gulino.
Frey, J. *See* Korioth, Gieffers, Maul, and Frey.
Frey, M. R. *See* Matera, Frey, Margelot, and Wolin.
Friedrich, V. L., Jr. *See* Fannon, Sherman, Ilyina-Gragerova, Brophy, Friedrich, and Colman.
Frisén, J., Johansson, C. B., Török, C., Risling, M., and Lendahl, U. Rapid, widespread, and longlasting induction of nestin contributes to the generation of glial scar tissue after CNS injury. 131:453.
Fritz, B. A. *See* Mays, Siemers, Fritz, Lowe, van Meer, and Nelson.
Fry, A. M. *See* Golsteyn, Mundt, Fry, and Nigg.
Fryling, C. M. *See* FitzGerald, Fryling, Zdanovsky, Saelinger, Kounnas, Winkles, Strickland, and Leppla.
Fuchs, E. *See* Lloyd, Yu, Cheng, Turksen, Degenstein, Hutton, and Fuchs.
Fuchs, H. *See* Steverding, Stierhof, Fuchs, Tauber, and Overath.
Fuchs, R. *See* Prchla, Plank, Wagner, Blaas, and Fuchs.
Fugang, L. *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.
Fujii-Nakata, T. *See* Kellogg, Kikuchi, Fujii-Nakata, Turck, and Murray.
Fujisawa-Sehara, A. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.
Fujita, N. *See* Bö, Quarles, Fujita, Bartoszewicz, Sato, and Trapp.
Fuller, S. D. *See* Chrétien, Fuller, and Karsenti.
Fumagalli, G. *See* Lorenzon, Zacchetti, Codazzi, Fumagalli, Meldolesi, and Grohovaz.
Funakoshi, H. *See* Timmusk, Lendahl, Funakoshi, Arenas, Persson, and Metsis.
— *See* Trupp, Rydén, Jörnvall, Funakoshi, Timmusk, Arenas, and Ibáñez.
Funayama, N., Fagotto, F., McCrea, P., and Gumbiner, B. M. Embryonic axis induction by the Armadillo repeat domain of β-catenin: Evidence for intracellular signaling. 128:959.
Fung, J. C. *See* Moritz, Braunfeld, Fung, Sedat, Alberts, and Agard.

G

Gabbiani, F. *See* Chaponnier, Goethals, Janmey, Gabbiani, Gabbiani, and Vandekerckhove.
Gabbiani, G. *See* Chaponnier, Goethals, Janmey, Gabbiani, Gabbiani, and Vandekerckhove.
Gadella, T. W. J., Jr., and Jovin, T. M. Oligomerization of epidermal growth factor receptors on A431 cells studied by time-resolved fluorescence imaging microscopy. A stereochemical model for tyrosine kinase receptor activation. 129:1543.
Gaertig, J., Cruz, M. A., Bowen, J., Gu, L., Pennock, D. G., and Gorovsky, M. A. Acetylation of lysine 40 in α-tubulin is not essential in *Tetrahymena thermophila*. 129:1301.
Gaglio, T., Saredi, A., and Compton, D. A. NuMA is required for the organization of microtubules into aster-like mitotic arrays. 131:693.
Gagnon, J. *See* Benmerah, Gagnon, Bègue, Mégarbané, Dautry-Varsa, and Cerf-Bensussan.
Gahmberg, C. G. *See* Li, Xie, Kantor, Koistinen, Altieri, Nortamo, and Gahmberg.
Gall, J. G. *See* Bellini, Lacroix, and Gall.
Galli, T. *See* Chilcote, Galli, Mundigl, Edelmann, McPherson, Takei, and De Camilli.
Gallo, C. J., Hand, A. R., Jones, T. L. Z., and Jaffe, L. A. Stimulation of *Xenopus* oocyte maturation by inhibition of the G-protein α_s subunit, a component of the plasma membrane and yolk platelet membranes. 130:275.
Gammie, A. E., Kurihara, L. J., Vallee, R. B., and Rose, M. D. *DNM1*, a dynamin-related gene, participates in endosomal trafficking in yeast. 130:553.
Gandarillas, A. *See* Hotchin, Gandarillas, and Watt.
Garcia, C. *See* Way, Sanders, Garcia, Sakai, and Matsudaira.
Garcia, E. P., McPherson, P. S., Chilcote, T. J., Takei, K., and De Camilli, P. rbSec1A and B colocalize with syntaxin 1 and SNAP-25 throughout the axon, but are not in a stable complex with syntaxin. 129:105.
Garcia-Blanco, M. A., Miller, D. D., and Sheetz, M. P. Nuclear spreads: I. Visualization of bipartite ribosomal RNA domains. 128:15.
Garcia-del Portillo, F., and Finlay, B. B. Targeting of *Salmonella typhimurium* to vesicles containing lysosomal membrane glycoproteins bypasses compartments with mannose 6-phosphate receptors. 129:81.
Garofalo, S. *See* Lefebvre, Garofalo, and de Crombrugghe.
Garoff, H. *See* Barth, Wahlberg, and Garoff.
Gary, R. *See* Berryman, Gary, and Bretscher.
Gaskins, C. *See* Segall, Kuspa, Shaulsky, Ecke, Maeda, Gaskins, Firtel, and Loomis.
Gasser, S. M. *See* Cockell, Palladino, Laroche, Kyrion, Liu, Lustig, and Gasser.
Gatti, M. *See* Gunsalus, Bonaccorsi, Williams, Verni, Gatti, and Goldberg.
— *See* Williams, Riedy, Williams, Gatti, and Goldberg.
Gaudernack, G. *See* Puri, Finger, Gaudernack, and Springer.
Gauzzi, M. C. *See* Castellani, Reedy, Gauzzi, Provenzano, Alemà, and Falcone.
Gebbink, M. F. B. G., Zondag, G. C. M., Koningstein, G. M., Feiken, E., Wubbolts, R. W., and Moolenaar, W. H. Cell surface expression of receptor protein tyrosine phosphatase RPTPμ is regulated by cell–cell contact. 131:251.
Gedde-Dahl, T., Jr. *See* Bruckner-Tuderman, Nilssen, Zimmermann, Dours-Zimmermann, Kalinke, Gedde-Dahl, and Winberg.
Geffen, I. *See* Wahlberg, Geffen, Reymond, Simmen, and Spiess.

Geiger, B. *See* Lampugnani, Corada, Caveda, Breviario, Ayalon, Geiger, and Dejana.
Geisler, N. *See* Huttenlauch, Geisler, Plessmann, Peck, Weber, and Stick.
Geist, S. T. *See* Koval, Geist, Westphale, Kemendy, Civitelli, Beyer, and Steinberg.
Gelfand, V. I. *See* Lombillo, Nislow, Yen, Gelfand, and McIntosh.
Geng, Y., and Lotz, M. Increased intracellular Ca^{2+} selectively suppresses IL-1–induced NO production by reducing iNOS mRNA stability. 129:1651.
Gepner, J. *See* McGrail, Gepner, Silvanovich, Ludmann, Serr, and Hays.
Gerace, L. *See* Greber and Gerace.
— *See* Melchior, Guan, Yokoyama, Nishimoto, and Gerace.
— *See* Paschal and Gerace.
— *See* Taniura, Glass, and Gerace.
Gerisch, G. *See* Kreitmeier, Gerisch, Heizer, and Müller-Taubenberger.
Gerretsen, M. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
Gesemann, M., Denzer, A. J., and Ruegg, M. A. Acetylcholine receptor-aggregating activity of agrin isoforms and mapping of the active site. 128:625.
— *See* Denzer, Gesemann, Schumacher, and Ruegg.
Gettner, S. N., Kenyon, C., and Reichardt, L. F. Characterization of βpat-3 heterodimers, a family of essential integrin receptors in *C. elegans*. 129:1127.
Geuze, H. J. *See* Raposo, van Santen, Leijendekker, Geuze, and Ploegh.
— *See* van Weert, Dunn, Geuze, Maxfield, and Stoorvogel.
Gherardi, E. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.
Ghosh, R. N., and Maxfield, F. R. Evidence for nonvectorial, retrograde transferrin trafficking in the early endosomes of HEp2 cells. 128:549.
Giancotti, F. G. *See* Spinardi, Einheber, Cullen, Milner, and Giancotti.
Giannetti, A. *See* Zambruno, Marchisio, Marconi, Vaschieri, Melchiori, Giannetti, and De Luca.
Giannini, G., Conti, A., Mammarella, S., Scrobogna, M., and Sorrentino, V. The ryanodine receptor/calcium channel genes are widely and differentially expressed in murine brain and peripheral tissues. 128:893.
Gibbons, I. R. *See* Saunders, Koshland, Eshel, Gibbons, and Hoyt.
Giddings, T. H., Jr. *See* Samuels, Giddings, and Staehelin.
— *See* Winey, Mamay, O'Toole, Mastronarde, Giddings, McDonald, and McIntosh.
Gieffers, C. *See* Korioth, Gieffers, Maul, and Frey.
Giger, R. J. *See* Suter, Pollerberg, Buchstaller, Giger, Dreyer, and Sonderegger.
Gill, S. *See* Chang, Gill, Settleman, and Parsons.
Gilmore, R. *See* Karaoglu, Kelleher, and Gilmore.
— *See* Silberstein, Collins, Kelleher, Rapiejko, and Gilmore.
— *See* Silberstein, Collins, Kelleher, and Gilmore.
Giménez-Abián, J. F., Clarke, D. J., Mullinger, A. M., Downes, C. S., and Johnson, R. T. A postprophase topoisomerase II–dependent chromatid core separation step in the formation of metaphase chromosomes. 131:7.
Gimeno, R. E. *See* Espenshade, Gimeno, Holzmacher, Teung, and Kaiser.
Ginsberg, M. H. *See* Shattil, O'Toole, Eigenthaler, Thon, Williams, Babior, and Ginsberg.
Girard, F. *See* Poulat, Girard, Chevron, Gozé, Rebillard, Calas, Lamb, and Berta.
Gisler, R. H. *See* Piali, Hammel, Uherek, Bachmann, Gisler, Dunon, and Imhof.
Glass, C. *See* Taniura, Glass, and Gerace.
Gliemann, J. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.
Gnessi, L., Emidi, A., Jannini, E. A., Carosa, E., Maroder, M., Arizzi, M., Ulisse, S., and Spera, G. Testicular development involves the spatiotemporal control of PDGFs and PDGF receptors gene expression and action. 131:1105.
Godfrey, E. W. *See* Cohen, Jacobson, Godfrey, Campbell, and Carbonetto.
Godyna, S., Liau, G., Popa, I., Stefansson, S., and Argraves, W. S. Identification of the low density lipoprotein receptor–related protein (LRP) as an endocytic receptor for thrombospondin-1. 129:1403.
Goeckeler, Z. M., and Wysolmerski, R. B. Myosin light chain kinase-regulated endothelial cell contraction: The relationship between isometric tension, actin polymerization, and myosin phosphorylation. 130:613.
Goethals, M. *See* Chaponnier, Goethals, Janmey, Gabbiani, Gabbiani, and Vandekerckhove.
Goheen, M. *See* Pavalko, Walker, Graham, Goheen, Doerschuk, and Kansas.
Goins, T. *See* Beauvais, Erickson, Goins, Craig, Humphries, Thiery, and Dufour.
Goishi, K. *See* Higashiyama, Iwamoto, Goishi, Raab, Taniguchi, Klagsbrun, and Mekada.
Goldberg, M. L. *See* Gunsalus, Bonaccorsi, Williams, Verni, Gatti, and Goldberg.
— *See* Williams, Riedy, Williams, Gatti, and Goldberg.
Goldman, D. *See* Adams, Carlson, Henderson, and Goldman.
Goldstein, B. Cell contacts orient some cell division axes in the *Caenorhabditis elegans* embryo. 129:1071.
Goldstein, L. S. B. *See* Deng, Lee, Goldstein, and Branton.
Golsteyn, R. M., Mundt, K. E., Fry, A. M., and Nigg, E. A. Cell cycle regulation of the activity and subcellular localization of PLK1, a human protein kinase implicated in mitotic spindle function. 129:1617.
Gomer, R. H. *See* Yuen, Jain, Bishop, Lindsey, Deery, Van Haastert, and Gomer.
Gonzalez Agosti, C. *See* Henry, Gonzalez Agosti, and Solomon.
Goodearl, A. D. J., Yee, A. G., Sandrock, A. W., Jr., Corfas, G., and Fischbach, G. D. ARIA is concentrated in the synaptic basal lamina of the developing chick neuromuscular junction. 130:1423.
Goodman, J. M. *See* Marshall, Krimkevich, Lark, Dyer, Veenhuis, and Goodman.
Goodman, S. R. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Gorbsky, G. J. *See* Campbell and Gorbsky.
— *See* Nicklas, Ward, and Gorbsky.
Gordon, J. I. *See* Hermiston and Gordon.
Gorodinsky, A., and Harris, D. A. Glycolipid-anchored proteins in neuroblastoma cells form detergent-resistant complexes without caveolin. 129:619.
Gorovsky, M. A. *See* Gaertig, Cruz, Bowen, Gu, Pennock, and Gorovsky.
Gorsch, L. C., Dockendorff, T. C., and Cole, C. N. A conditional allele of the novel repeat-containing yeast nucleoporin *RAT7 / NUP159* causes both rapid cessation of mRNA export and reversible clustering of nuclear pore complexes. 129:939.
Goshima, K. *See* Nakamura, Yamamoto, Nishitani, Matozaki, Suzuki, Wakabayashi, Shigekawa, and Goshima.
Goto, K., and Johnson, C. Is the cell division cycle gated by a circadian clock? The case of *Chlamydomonas reinhardtii*. 129:1061.
Gougeon, M.-L. *See* Petit, Lecoeur, Zorn, Dauguet, Mignotte, and Gougeon.
Gould, K. L. *See* McCollum, Balasubramanian, Pelcher, Hemmingsen, and Gould.
Gounon, P. *See* Adam, Arpin, Prévost, Gounon, and Sansonetti.
Govindan, B., Bowser, R., and Novick, P. The role of Myo2, a yeast class V myosin, in vesicular transport. 128:1055.
Gozé, C. *See* Poulat, Girard, Chevron, Gozé, Rebillard, Calas, Lamb, and Berta.
Graham, L. *See* Pavalko, Walker, Graham, Goheen, Doerschuk, and Kansas.
Grandi, P., Emig, S., Weise, C., Hucho, F., Pohl, T., and Hurt, E. C. A novel nuclear pore protein Nup82p which specifically binds to a fraction of Nsp1p. 130:1263.
Gratzer, S., Lithgow, T., Bauer, R. E., Lamping, E., Paltauf, F., Kohlwein, S. D., Haucke, V., Junne, T., Schatz, G., and Horst, M. Mas37p, a novel receptor subunit for protein import into mitochondria. 129:25.
Graves, L. M. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Greber, U. F., and Gerace, L. Depletion of calcium from the lumen of endoplasmic reticulum reversibly inhibits passive diffusion and signal-mediated transport into the nucleus. 128:5.
Greenfield, B. *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.
Greengard, P. *See* Ceccaldi, Grohovaz, Benfenati, Chieregatti, Greengard, and Valtorta.
Gregorio, C. C., and Fowler, V. M. Mechanisms of thin filament assembly in embryonic chick cardiac myocytes: Tropomodulin requires tropomyosin for assembly. 129:683.
Gregory, J. *See* Waterman-Storer, Gregory, Parsons, and Salmon.

Grein, K. *See* Spang, Courtney, Grein, Matzner, and Schiebel.
Grieshammer, U. *See* Xiao, Grieshammer, and Rosenthal.
Griffin, J. W. *See* Wong, Marszalek, Crawford, Xu, Hsieh, Griffin, and Cleveland.
Grinnell, F. *See* He and Grinnell.
Grohovaz, F. *See* Ceccaldi, Grohovaz, Benfenati, Chieregatti, Greengard, and Valtorta.
— *See* Lorenzon, Zacchetti, Codazzi, Fumagalli, Meldolesi, and Grohovaz.
Grolig, F. *See* Sawitzky and Grolig.
Gross, S. D., Hoffman, D. P., Fisette, P. L., Baas, P., and Anderson, R. A. A phosphatidylinositol 4,5-*bis*phosphate–sensitive casein kinase Iα associates with synaptic vesicles and phosphorylates a subset of vesicle proteins. 130:711.
Grund, C. *See* Demlehner, Schäfer, Grund, and Franke.
Gruver, C. *See* McGoldrick, Gruver, and May.
Gu, L. *See* Gaertig, Cruz, Bowen, Gu, Pennock, and Gorovsky.
Guan, T. *See* Melchior, Guan, Yokoyama, Nishimoto, and Gerace.
Guild, G. M. *See* Tilney, Tilney, and Guild.
Guinebault, C., Payrastre, B., Racaud-Sultan, C., Mazarguil, H., Breton, M., Mauco, G., Plantavid, M., and Chap, H. Integrin-dependent translocation of phosphoinositide 3-kinase to the cytoskeleton of thrombin-activated platelets involves specific interactions of p85α with actin filaments and focal adhesion kinase. 129:831.
Gulino, A. *See* Screpanti, Scarpa, Meco, Bellavia, Stuppia, Frati, Modesti, and Gulino.
Gull, K. *See* Lange and Gull.
— *See* Robinson, Sherwin, Ploubidou, Byard, and Gull.
Gumbiner, B. M. *See* Funayama, Fagotto, McCrea, and Gumbiner.
Gundersen, G. G. *See* Gurland and Gundersen.
Gunsalus, K. C., Bonaccorsi, S., Williams, E., Verni, F., Gatti, M., and Goldberg, M. L. Mutations in *twinstar*, a *Drosophila* gene encoding a cofilin/ADF homologue, result in defects in centrosome migration and cytokinesis. 131:1243.
Gurland, G., and Gundersen, G. G. Stable, detyrosinated microtubules function to localize vimentin intermediate filaments in fibroblasts. 131:1275.
Gussio, R. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Gustavsson, J. *See* Parpal, Gustavsson, and Strålfors.

H

Ha, D. B. *See* Kang, Shin, Song, Ha, Chung, and Kang.
Ha, M. H. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Haas, S., Thatikunta, P., Steplewski, A., Johnson, E. M., Khalili, K., and Amini, S. A 39-kD DNA-binding protein from mouse brain stimulates transcription of myelin basic protein gene in oligodendrocytic cells. 130:1171.
Haass, C., Koo, E. H., Capell, A., Teplow, D. B., and Selkoe, D. J. Polarized sorting of β-amyloid precursor protein and its proteolytic products in MDCK cells is regulated by two independent signals. 128:537.
Hadac, E. *See* Roettger, Rentsch, Pinon, Holicky, Hadac, Larkin, and Miller.
Hadac, E. M. *See* Roettger, Rentsch, Hadac, Hellen, Burghardt, and Miller.
Hagan, I., and Yanagida, M. The product of the spindle formation gene *sad1*$^+$ associates with the fission yeast spindle pole body and is essential for viability. 129:1033.
Hagios, C. *See* Koch, Bohrmann, Matthison, Hagios, Trueb, and Chiquet.
Hakomori, S. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Halban, P. A. *See* Sadoul, Lang, Montecucco, Weller, Regazzi, Catsicas, Wollheim, and Halban.
Hall, A. *See* Hotchin and Hall.
Hallett, M. B. *See* van den Berg, Cinek, Hallett, Horejsi, and Morgan.
Hamburger, D., Egerton, M., and Riezman, H. Yeast Gaalp is required for attachment of a completed GPI anchor onto proteins. 129:629.
Hamik, A. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Hammel, P. *See* Piali, Hammel, Uherek, Bachmann, Gisler, Dunon, and Imhof.
Hanada, K., and Pagano, R. E. A Chinese hamster ovary cell mutant defective in the non-endocytic uptake of fluorescent analogs of phosphatidylserine: Isolation using a cytosol acidification protocol. 128:793.
Hand, A. R. *See* Gallo, Hand, Jones, and Jaffe.
Haney, P. M., Levy, M. A., Strube, M. S., and Mueckler, M. Insulin-sensitive targeting of the GLUT4 glucose transporter in L6 myoblasts is conferred by its COOH-terminal cytoplasmic tail. 129:641.
Hanneken, A., Maher, P. A., and Baird, A. High affinity immunoreactive FGF receptors in the extracellular matrix of vascular endothelial cells: Implications for the modulation of FGF-2. 128:1221.
Hannocks, M.-J. *See* Einheber, Hannocks, Metz, Rifkin, and Salzer.
Hansen, A. *See* Schmalzing, Richter, Hansen, Schwarz, Just, and Aktories.
Hantraye, P. *See* Allinquant, Hantraye, Mailleux, Moya, Bouillot, and Prochiantz.
Harada, A. *See* Takei, Harada, Takeda, Kobayashi, Terada, Noda, Takahashi, and Hirokawa.
Harding, T. M., Morano, K. A., Scott, S. V., and Klionsky, D. J. Isolation and characterization of yeast mutants in the cytoplasm to vacuole protein targeting pathway. 131:591.
Hardman, P. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.
Hardwick, J. M. *See* Lin, Lee, Narayanan, Baraban, Hardwick, and Ratan.
Hardwick, K. G., and Murray, A. W. Mad1p, a phosphoprotein component of the spindle assembly checkpoint in budding yeast. 131:709.
Harris, A. *See* Fawcett, Buckley, Holness, Bird, Spragg, Saunders, Harris, and Simmons.
Harris, D. A. *See* Gorodinsky and Harris.
Harris, S. *See* Schlenstedt, Harris, Risse, Lill, and Silver.
Harsay, E., and Bretscher, A. Parallel secretory pathways to the cell surface in yeast. 131:297.
Hartmann, G. *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Hartwell, L. H. *See* Dorer, Pryciak, and Hartwell.
Hartwig, J. *See* Cox, Ridsdale, Condeelis, and Hartwig.
Haucke, V. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Hauri, H.-P. *See* Itin, Schindler, and Hauri.
— *See* Volz, Orberger, Porwoll, Hauri, and Tauber.
Hawley, R. S. *See* Afshar, Scholey, and Hawley.
Hayakawa, M. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
Haynes, R. *See* Nicchitta, Murphy, Haynes, and Shelness.
Hays, T. S. *See* McGrail, Gepner, Silvanovich, Ludmann, Serr, and Hays.
Hazan, R. B. *See* Burgoon, Hazan, Phillips, Crossin, Edelman, and Cunningham.
He, Q. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
He, Y., and Grinnell, F. Role of phospholipase D in the cAMP signal transduction pathway activated during fibroblast contraction of collagen matrices. 130:1197.
Hearst, J. E. *See* Yokota, van den Engh, Hearst, Sachs, and Trask.
Heath, C. V., Copeland, C. S., Amberg, D. C., Del Priore, V., Snyder, M., and Cole, C. N. Nuclear pore complex clustering and nuclear accumulation of poly(A)$^+$ kkRNA associated with mutation of the *Saccharomyces cerevisiae RAT2 / NUP120* gene. 131:1677.
Hedgecock, E. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Heizer, C. *See* Kreitmeier, Gerisch, Heizer, and Müller-Taubenberger.
Heldin, C.-H. *See* Yamashita, ten Dijke, Huylebroeck, Sampath, Andries, Smith, Heldin, and Miyazono.
Helenius, A. *See* Simons, Ferro-Novick, Rose, and Helenius.
Hellen, E. H. *See* Roettger, Rentsch, Hadac, Hellen, Burghardt, and Miller.
Hellio, R. *See* Hémar, Subtil, Lieb, Morelon, Hellio, and Dautry-Varsat.
Hémar, A., Subtil, A., Lieb, M., Morelon, E., Hellio, R., and Dautry-Varsat, A. Endocytosis of interleukin 2 receptors in human T lymphocytes: Distinct intracellular localization and fate of the receptor α, β, γ chains. 129:55.
Hemler, M. E. *See* Alon, Kassner, Carr, Finger, Hemler, and Springer.

Hemmings, B. A. *See* Turowski, Fernandez, Favre, Lamb, and Hemmings.
Hemmingsen, S. M. *See* McCollum, Balasubramanian, Pelcher, Hemmingsen, and Gould.
Henderson, L. *See* Adams, Carlson, Henderson, and Goldman.
Hennecke, S. *See* Letourneur, Hennecke, Démollière, and Cosson.
Henry, M. D., Gonzalez Agosti, C., and Solomon, F. Molecular dissection of radixin: Distinct and interdependent functions of the amino- and carboxy-terminal domains. 129:1007.
Herman, I. M. *See* Shuster and Herman.
Hermiston, M. L., and Gordon, J. I. In vivo analysis of cadherin function in the mouse intestinal epithelium: Essential roles in adhesion, maintenance of differentiation, and regulation of programmed cell death. 129:489.
Herskowitz, I. *See* Chant, Mischke, Mitchell, Herskowitz, and Pringle.
— *See* Valtz, Peter, and Herskowitz.
Herzog, M. *See* Small, Herzog, and Anderson.
Heuerman, C. A. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Heuser, J. *See* Burns, Reedy, Heuser, and De Lozanne.
Higashiyama, S., Iwamoto, R., Goishi, K., Raab, G., Taniguchi, N., Klagsbrun, M., and Mekada, E. The membrane protein CD9/DRAP 27 potentiates the juxtacrine growth factor activity of the membrane-anchored heparin-binding EGF-like growth factor. 128:929.
Higgins, A. *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.
Hildebrand, J. D. *See* Schaller, Otey, Hildebrand, and Parsons.
Hilkens, J. *See* Wesseling, van der Valk, Vos, Sonnenberg, and Hilkens.
Hinds, T. R. *See* Mark, Liu, Wong, Hinds, and Storm.
Hirai, S. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Hirokawa, N. *See* Nakagawa, Chen, Zhang, Kanai, and Hirokawa.
— *See* Nakata and Hirokawa.
— *See* Noda, Sato-Yoshitake, Kondo, Nangaku, and Hirokawa.
— *See* Takei, Harada, Takeda, Kobayashi, Terada, Noda, Takahashi, and Hirokawa.
— *See* Yamazaki, Nakata, Okada, and Hirokawa.
Hirst, T. R. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.
Hisanaga, S. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.
Hitt, A. L. *See* Shutt, Wessels, Wagenknecht, Chandrasekhar, Hitt, Luna, and Soll.
Ho, T. *See* Tanaka, Ho, and Kirschner.
Hofeldt, A. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Hoffman, D. P. *See* Gross, Hoffman, Fisette, Baas, and Anderson.
Hoffman, S. *See* Balsamo, Ernst, Zanin, Hoffman, and Lilien.
— *See* Byeon, Sugi, Markwald, and Hoffman.
Hofman, P. M. *See* McCormick, Hofman, Kim, Carnes, Miller, and Madara.
Holicky, E. *See* Roettger, Rentsch, Pinon, Holicky, Hadac, Larkin, and Miller.
Hollenbeck, P. J. *See* Morris and Hollenbeck.
Holmes, R. K. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.
Holmvall, K. *See* Kadoya, Kadoya, Durbeej, Holmvall, Sorokin, and Ekblom.
Holness, C. L. *See* Fawcett, Buckley, Holness, Bird, Spragg, Saunders, Harris, and Simmons.
Holt, J. *See* Houmeida, Holt, Tskhovrebova, and Trinick.
Holzmacher, E. *See* Espenshade, Gimeno, Holzmacher, Teung, and Kaiser.
Höning, S., and Hunziker, W. Cytoplasmic determinants involved in direct lysosomal sorting, endocytosis, and basolateral targeting of rat lgp120 (lamp-1) in MDCK cells. 128:321.
Hopkins, C. R. *See* Stinchcombe, Nomoto, Cutler, and Hopkins.
Hopkinson, S. B., Baker, S. E., and Jones, J. C. R. Molecular genetic studies of a human epidermal autoantigen (the 180-kD bullous pemphigoid antigen/BP180): Identification of functionally important sequences within the BP180 molecule and evidence for an interaction between BP180 and $\alpha 6$ integrin. 130:117.
Hopper, A. K. *See* Corbett, Koepp, Schlenstedt, Lee, Hopper, and Silver.
Horejsi, V. *See* van den Berg, Cinek, Hallett, Horejsi, and Morgan.
Hori, T. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
Horowitz, R. A. *See* Bednar, Horowitz, Dubochet, and Woodcock.
Horst, M. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Horwitz, A. F. *See* Crowley and Horwitz.
Horzinek, M. C. *See* Opstelten, Raamsman, Wolfs, Horzinek, and Rottier.
Hoshi, M. *See* Sase, Okinaga, Hoshi, Feigenson, and Kinosita.
Hotani, H. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.
Hotchin, N. A., Gandarillas, A., and Watt, F. M. Regulation of cell surface β_1 integrin levels during keratinocyte terminal differentiation. 128:1209.
—, **and Hall, A.** The assembly of integrin adhesion complexes requires both extracellular matrix and intracellular rho/rac GTPases. 131:1857.
Hoth, M. *See* Fanger, Hoth, Crabtree, and Lewis.
Houghton, A. N. *See* Vijayasaradhi, Xu, Bouchard, and Houghton.
Houmeida, A., Holt, J., Tskhovrebova, L., and Trinick, J. Studies of the interaction between titin and myosin. 131:1471.
Housman, D. *See* Taneja, McCurrach, Schalling, Housman, and Singer.
Howard, G. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Howard, J. *See* Mickey and Howard.
Hoyt, M. A. *See* Saunders, Koshland, Eshel, Gibbons, and Hoyt.
Hsieh, S.-T. *See* Wong, Marszalek, Crawford, Xu, Hsieh, Griffin, and Cleveland.
Hsu, V. W. *See* Peters, Hsu, Ooi, Finazzi, Teal, Oorschot, Donaldson, and Klausner.
Hu, R.-J., Moorthy, S., and Bennett, V. Expression of functional domains of Beta$_G$-Spectrin disrupts epithelial morphology in cultured cells. 128:1069.
Hu, W. *See* Zhang, Hu, and Ramirez.
Huang, S.-n. *See* Rak, Mitsuhashi, Erdos, Huang, Filmus, and Kerbel.
Hubbe, M. *See* Ruppert, Aigner, Hubbe, Yagita, and Altevogt.
Hubert, M. *See* Nörenberg, Hubert, Brümmendorf, Tárnok, and Rathjen.
Huchet, M. *See* Antony, Huchet, Changeux, and Cartaud.
Hucho, F. *See* Grandi, Emig, Weise, Hucho, Pohl, and Hurt.
Hug, C. *See* Schafer, Hug, and Cooper.
Huhtala, P., Humphries, M. J., McCarthy, J. B., Tremble, P. M., Werb, Z., and Damsky, C. H. Cooperative signaling by $\alpha 5\beta 1$ and $\alpha 4\beta 1$ integrins regulates metalloproteinase gene expression in fibroblasts adhering to fibronectin. 129:867.
Hui, N. *See* Nakamura, Rabouille, Watson, Nilsson, Hui, Slusarewicz, Kreis, and Warren.
Hülser, D. F. *See* Elfgang, Eckert, Lichtenberg-Fraté, Butterweck, Traub, Klein, Hülser, and Willecke.
Humphries, M. J. *See* Beauvais, Erickson, Goins, Craig, Humphries, Thiery, and Dufour.
— *See* Huhtala, Humphries, McCarthy, Tremble, Werb, and Damsky.
Hunziker, W. *See* de Hoop, von Poser, Lange, Ikonen, Hunziker, and Dotti.
— *See* Höning and Hunziker.
Hurt, E. C. *See* Grandi, Emig, Weise, Hucho, Pohl, and Hurt.
Hurwitz, M. E., and Blobel, G. NUP82 is an essential yeast nucleoporin required for poly(A)$^+$ RNA export. 130:1275.
Huttenlauch, I., Geisler, N., Plessmann, U., Peck, R. K., Weber, K., and Stick, R. Major epiplasmic proteins of ciliates are articulins: Cloning, recombinant expression, and structural characterization. 130:1401.
Hutton, E. *See* Lloyd, Yu, Cheng, Turksen, Degenstein, Hutton, and Fuchs.
Huylebroeck, D. *See* Yamashita, ten Dijke, Huylebroeck, Sampath, Andries, Smith, Heldin, and Miyazono.
Hyman, A. A., Chrétien, D., Arnal, I., and Wade, R. H. Structural changes accompanying GTP hydrolysis in microtubules: Information from a slowly hydrolyzable analogue guanylyl-(α,β)-methylenediphosphonate. 128:117.
Hyman, R. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Hynes, N. E. *See* Merlo, Basolo, Fiore, Duboc, and Hynes.

I

Ibáñez, C. F. *See* Truppk, Rydén, Jörnvall, Funakoshi, Timmusk, Arenas, and Ibáñez.

Ibraghimov-Beskrovnaya, O. *See* Durbeej, Larsson, Ibraghimov-Beskrovnaya, Roberds, Campbell, and Ekblom.

Ifrim, I. *See* Kruth, Skarlatos, Lilly, Chang, and Ifrim.

Igarashi, Y. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.

Ikeda, T. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.

Ikonen, E. *See* de Hoop, von Poser, Lange, Ikonen, Hunziker, and Dotti.

Ilyina-Gragerova, G. *See* Fannon, Sherman, Ilyina-Gragerova, Brophy, Friedrich, and Colman.

Imajoh-Ohmi, S. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.

Imhof, B. A. *See* Piali, Hammel, Uherek, Bachmann, Gisler, Dunon, and Imhof.

Inagaki, M. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.

Inagaki, N. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.

Iovine, M. K., Watkins, J. L., and Wente, S. R. The GLFG repetitive region of the nucleoporin Nup116p interacts with Kap95p, an essential yeast nuclear import factor. 131:1699.

Itin, C., Schindler, R., and Hauri, H.-P. Targeting of protein ERGIC-53 to the ER/ERGIC/*cis*-Golgi recycling pathway. 131:57.

Ito, F. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.

Itoh, T. J. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.

Iwamoto, M. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.

Iwamoto, R. *See* Higashiyama, Iwamoto, Goishi, Raab, Taniguchi, Klagsbrun, and Mekada.

— *See* Nakamura, Iwamoto, and Mekada.

Iyama, K. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.

J

Jackson, D. G., Bell, J. I., Dickinson, R., Timans, J., Shields, J., and Whittle, N. Proteoglycan forms of the lymphocyte homing receptor CD44 are alternatively spliced variants containing the v3 exon. 128:673.

— *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.

— *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.

Jackson, P. K., Chevalier, S., Philippe, M., and Kirschner, M. W. Early events in DNA replication require cyclin E and are blocked by $p21^{CIP1}$. 130:755.

Jacobs, R. *See* Acharya, McCaffery, Jacobs, and Malhotra.

Jacobson, C. *See* Cohen, Jacobson, Godfrey, Campbell, and Carbonetto.

Jacobson, M. R., Cao, L.-G., Wang, Y.-L., and Pederson, T. Dynamic localization of RNase MRP RNA in the nucleolus observed by fluorescent RNA cytochemistry in living cells. 131:1649.

Jaenisch, R. *See* Liu, Wu, Byrne, Jeffrey, Krane, and Jaenisch.

Jaffe, L. A. *See* Gallo, Hand, Jones, and Jaffe.

Jaggi, R. *See* Feng, Marti, Jehn, Altermatt, Chicaiza, and Jaggi.

Jahn, R. *See* Stenius, Janz, Südhof, and Jahn.

— *See* Walch-Solimena, Blasi, Edelmann, Chapman, von Mollard, and Jahn.

Jain, R. *See* Yuen, Jain, Bishop, Lindsey, Deery, Van Haastert, and Gomer.

James, D. E. *See* Marsh, Alm, McIntosh, and James.

Jan, Y. N. *See* Eaton, Auvinen, Luo, Jan, and Simons.

Janmey, P. A. *See* Chaponnier, Goethals, Janmey, Gabbiani, Gabbiani, and Vandekerckhove.

Jannini, E. A. *See* Gnessi, Emidi, Jannini, Carosa, Maroder, Arizzi, Ulisse, and Spera.

Janz, R. *See* Stenius, Janz, Südhof, and Jahn.

Jardine, K. *See* Slack, Skerjanc, Lach, Craig, Jardine, and McBurney.

Jat, P. S. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.

Jedd, G., Richardson, C., Litt, R., and Segev, N. The Ypt1 GTPase is essential for the first two steps of the yeast secretory pathway. 131:583.

Jedlitschky, G. *See* Mayer, Kartenbeck, Büchler, Jedlitschky, Leier, and Keppler.

Jeffrey, J. *See* Liu, Wu, Byrne, Jeffrey, Krane, and Jaenisch.

Jehn, B. *See* Feng, Marti, Jehn, Altermatt, Chicaiza, and Jaggi.

Jennings, P. R. *See* Motley, Lumb, Oatey, Jennings, De Zoysa, Wanders, Tabak, and Danpure.

Jeong, M. C. *See* Marrs, Andersson-Fisone, Jeong, Cohen-Gould, Zurzolo, Nabi, Rodriguez-Boulan, and Nelson.

Jeyaprakash, A. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.

Jikko, A. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.

Jobling, M. G. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.

Johansen, J. *See* Briggs, Silvers, Johansen, and Johansen.

Johansen, K. M. *See* Briggs, Silvers, Johansen, and Johansen.

Johansson, C. B. *See* Frisén, Johansson, Török, Risling, and Lendahl.

Johansson, S. *See* Fässler, Pfaff, Murphy, Noegel, Johansson, Timpl, and Albrecht.

John, K. M. *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.

Johnson, C. *See* Goto and Johnson.

Johnson, C. V. *See* Xing, Johnson, Moen, McNeil, and Bentley Lawrence.

Johnson, D. A. *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.

Johnson, E. M. *See* Haas, Thatikunta, Steplewski, Johnson, Khalili, and Amini.

Johnson, K. F. *See* Rohrer, Schweizer, Johnson, and Kornfeld.

Johnson, K. R. *See* Knudsen, Soler, Johnson, and Wheelock.

— *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.

— *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.

Johnson, R. T. *See* Giménez-Abián, Clarke, Mullinger, Downes, and Johnson.

Jones, J. C. R. *See* Hopkinson, Baker, and Jones.

Jones, N. L. *See* Marsh, Leopold, Jones, and Maxfield.

Jones, S., Litt, R. J., Richardson, C. J., and Segev, N. Requirement of nucleotide exchange factor for Ypt1 GTPase mediated protein transport. 130:1051.

Jones, T. L. Z. *See* Gallo, Hand, Jones, and Jaffe.

Jordan, P. *See* Carvalho, Seeler, Öhman, Jordan, Pettersson, Akusjärvi, Carmo-Fonseca, and Dejean.

Jörnvall, H. *See* Trupp, Rydén, Jörnvall, Funakoshi, Timmusk, Arenas, and Ibáñez.

Joshi, H. C. *See* Li and Joshi.

— *See* Shu and Joshi.

Jovin, T. M. *See* Gadella and Jovin.

Junne, T. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.

Just, I. *See* Schmalzing, Richter, Hansen, Schwarz, Just, and Aktories.

K

Kadoya, K. *See* Kadoya, Kadoya, Durbeej, Holmvall, Sorokin, and Ekblom.

Kadoya, Y., Kadoya, K., Durbeej, M., Holmvall, K., Sorokin, L., and Ekblom, P. Antibodies against domain E3 of laminin-1 and integrin $\alpha 6$ subunit perturb branching epithelial morphogenesis of submandibular gland, but by different modes. 129:521.

Kagawa, M. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.

Kaipainen, A. *See* Västrik, Kaipainen, Penttilä, Lymboussakis, Alitalo, Parvinen, and Alitalo.

Kaiser, C. A. *See* Espenshade, Gimeno, Holzmacher, Teung, and Kaiser.

— *See* Shaywitz, Orci, Ravazzola, Swaroop, and Kaiser.

Kalinke, D. U. *See* Bruckner-Tuderman, Nilssen, Zimmermann, Dours-Zimmermann, Kalinke, Gedde-Dahl, and Winberg.
Kanai, Y. *See* Nakagawa, Chen, Zhang, Kanai, and Hirokawa.
Kandror, K. V., Stephens, J. M., and Pilch, P. F. Expression and compartmentalization of caveolin in adipose cells: Coordinate regulation with and structural segregation from GLUT4. 129:999.
Kang, M.-S. *See* Kang, Shin, Song, Ha, Chung, and Kang.
Kang, S. J., Shin, K. S., Song, W. K., Ha, D. B., Chung, C. H., and Kang, M.-S. Involvement of transglutaminase in myofibril assembly of chick embryonic myoblasts in culture. 130:1127.
Kansas, G. S. *See* Pavalko, Walker, Graham, Goheen, Doerschuk, and Kansas.
Kantor, C. *See* Li, Xie, Kantor, Koistinen, Altieri, Nortamo, and Gahmberg.
Kaplan, D. R. *See* Ehlers, Kaplan, Price, and Koliatsos.
Kaplan, J. *See* Ward, Perou, Lloyd, and Kaplan.
Karaoglu, D., Kelleher, D. J., and Gilmore, R. Functional characterization of Ost3p. Loss of the 34-kD subunit of the *Saccharomyces cerevisiae* oligosaccharyltransferase results in biased underglycosylation of acceptor substrates. 130:567.
Karin, M. *See* Rosette and Karin.
Karpova, T. S., Tatchell, K., and Cooper, J. A. Actin filaments in yeast are unstable in the absence of capping protein or fimbrin. 131:1483.
Karsenti, E. *See* Andersen, Buendia, Domínguez, Sawyer, and Karsenti.
— *See* Chrétien, Fuller, and Karsenti.
Kartenbeck, J. *See* Mayer, Kartenbeck, Büchler, Jedlitschky, Leier, and Keppler.
Kasprzak, L. *See* Laird, Castillo, and Kasprzak.
Kassner, P. D. *See* Alon, Kassner, Carr, Finger, Hemler, and Springer.
Katagiri, T., Yamaguchi, A., Komaki, M., Abe, E., Takahashi, N., Ikeda, T., Rosen, V., Wozney, J. M., Fujisawa-Sehara, A., and Suda, T. Bone morphogenetic protein-2 converts the differentiation pathway of C2C12 myoblasts into the osteoblast lineage: Correction. 128:715.
Kato, T. *See* Kuriyama, Kofron, Essner, Kato, Dragas-Granoic, Omoto, and Khodjakov.
Katoh, S. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Kaupp, O. *See* Aeschlimann, Kaupp, and Paulsson.
Kearsey, S. E. *See* Todorov, Attaran, and Kearsey.
Kelleher, D. J. *See* Karaoglu, Kelleher, and Gilmore.
— *See* Silberstein, Collins, Kelleher, and Gilmore.
— *See* Silberstein, Collins, Kelleher, Rapiejko, and Gilmore.
Kelleher, J. F., Atkinson, S. J., and Pollard, T. D. Sequences, structural models, and cellular localization of the actin-related proteins Arp2 and Arp3 from *Acanthamoeba*. 131:385.
Kellermann, O. *See* Poliard, Nifuji, Lamblin, Plee, Forest, and Kellermann.
Kellogg, D. R., Kikuchi, A., Fujii-Nakata, T., Turck, C. W., and Murray, A. W. Members of the NAP/SET family of proteins interact specifically with B-type cyclins. 130:661.
—, **and Murray, A. W.** NAP1 acts with Clb2 to perform mitotic functions and to suppress polar bud growth in budding yeast. 130:675.
Kelly, R., Alonso, S., Tajbakhsh, S., Cossu, G., and Buckingham, M. Myosin light chain 3F regulatory sequences confer regionalized cardiac and skeletal muscle expression in transgenic mice. 129:383.
Kelly, R. B. *See* Desnos, Clift-O'Grady, and Kelly.
Kemendy, A. E. *See* Koval, Geist, Westphale, Kemendy, Civitelli, Beyer, and Steinberg.
Kennedy Keller, R. *See* Pittler, Fliesler, Fisher, Kennedy Keller, and Rapp.
Kenyon, C. *See* Gettner, Kenyon, and Reichardt.
Keppler, D. *See* Mayer, Kartenbeck, Büchler, Jedlitschky, Leier, and Keppler.
Kerbel, R. S. *See* Rak, Mitsuhashi, Erdos, Huang, Filmus, and Kerbel.
Ketela, T. *See* Lussier, Sdicu, Ketela, and Bussey.
Khalili, K. *See* Haas, Thatikunta, Steplewski, Johnson, Khalili, and Amini.
Khan, M. *See* Cheng, Khan, and Mudge.
Khodjakov, A. *See* Kuriyama, Kofron, Essner, Kato, Dragas-Granoic, Omoto, and Khodjakov.
— *See* Rieder, Cole, Khodjakov, and Sluder.
Kiehart, D. P. *See* Miller and Kiehart.
Kikuchi, A. *See* Kellogg, Kikuchi, Fujii-Nakata, Turck, and Murray.
Killick, R., Legan, P. K., Malenczak, C., and Richardson, G. P. Molecular cloning of chick β-tectorin, an extracellular matrix molecule of the inner ear. 129:535.
Kim, J. *See* McCormick, Hofman, Kim, Carnes, Miller, and Madara.
Kim, P. S., and Arvan, P. Calnexin and BiP act as sequential molecular chaperones during thyroglobulin folding in the endoplasmic reticulum. 128:29.
Kincade, P. W. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Kinch, M. S., Clark, G. J., Der, C. J., and Burridge, K. Tyrosine phosphorylation regulates the adhesions of Ras-transformed breast epithelia. 130:461.
King, S. M., Patel-King, R. S., Wilkerson, C. G., and Witman, G. B. The 78,000-M_r intermediate chain of *Chlamydomonas* outer arm dynein is a microtubule-binding protein. 131:399.
— *See* Wilkerson, King, Koutoulis, Pazour, and Witman.
Kingsbury, J. *See* Strunnikov, Kingsbury, and Koshland.
Kinoshita, I. *See* Vilquin, Wagner, Kinoshita, Roy, and Tremblay.
Kinosita, K., Jr. *See* Sase, Okinaga, Hoshi, Feigenson, and Kinosita.
Kirschner, M. W. *See* Jackson, Chevalier, Philippe, and Kirschner.
— *See* Tanaka, Ho, and Kirschner.
— *See* Tanaka and Kirschner.
Kishimoto, T. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.
Kishiro, Y. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.
Kiss, I. *See* Török, Strand, Schmitt, Tick, Török, Kiss, and Mechler.
Kitamura, N. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
Klagsbrun, M. *See* Higashiyama, Iwamoto, Goishi, Raab, Taniguchi, Klagsbrun, and Mekada.
Klausner, R. D. *See* Peters, Hsu, Ooi, Finazzi, Teal, Oorschot, Donaldson, and Klausner.
Klein, G. *See* Armeanu, Bühring, Reuss-Borst, Müller, and Klein.
Klein, R. A. *See* Elfgang, Eckert, Lichtenberg-Fraté, Butterweck, Traub, Klein, Hülser, and Willecke.
Klein, S. *See* Bikfalvi, Klein, Pintucci, Quarto, Mignatti, and Rifkin.
Klein, W. H. *See* Venuti, Morris, Vivian, Olson, and Klein.
Klionsky, D. J. *See* Harding, Morano, Scott, and Klionsky.
— *See* Scott and Klionsky.
Klis, F. *See* Lu, Montijn, Brown, Klis, Kurjan, Bussey, and Lipke.
Knippels, E. M. C. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
Knudsen, K. A., Soler, A. P., Johnson, K. R., and Wheelock, M. J. Interaction of α-actinin with the cadherin/catenin cell–cell adhesion complex via α-catenin. 130:67.
Kobayashi, K. *See* Takei, Harada, Takeda, Kobayashi, Terada, Noda, Takahashi, and Hirokawa.
Koch, M., Bohrmann, B., Matthison, M., Hagios, C., Trueb, B., and Chiquet, M. Large and small splice variants of collagen XII: Differential expression and ligand binding. 130:1005.
Koepp, D. M. *See* Corbett, Koepp, Schlenstedt, Lee, Hopper, and Silver.
Koff, A. *See* Fan, Lu, Wu, DeBlasio, Koff, and Mendelsohn.
Kofron, M. *See* Kuriyama, Kofron, Essner, Kato, Dragas-Granoic, Omoto, and Khodjakov.
Kohlwein, S. D. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Koistinen, V. *See* Li, Xie, Kantor, Koistinen, Altieri, Nortamo, and Gahmberg.
Koivunen, E. *See* Pasqualini, Koivunen, and Ruoslahti.
Kolatsi-Joannou, M. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.
Koliatsos, V. E. *See* Ehlers, Kaplan, Price, and Koliatsos.
Komaki, M. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.
Kondo, S. *See* Noda, Sato-Yoshitake, Kondo, Nangaku, and Hirokawa.
Koningstein, G. M. *See* Gebbink, Zondag, Koningstein, Feiken, Wubbolts, and Moolenaar.
Koo, E. H. *See* Haass, Koo, Capell, Teplow, and Selkoe.
— *See* Yamazaki, Selkoe, and Koo.
Korioth, F., Gieffers, C., Maul, G. G., and Frey, J. Molecular characterization of NDP52, a novel protein of the nuclear domain 10, which is redistributed upon virus infection and interferon treatment. 130:1.
Korn, E. D. *See* Baines, Corigliano-Murphy, and Korn.
Kornfeld, S. *See* Rohrer, Schweizer, Johnson, and Kornfeld.

Koshland, D. *See* Saunders, Koshland, Eshel, Gibbons, and Hoyt.
— *See* Strunnikov, Kingsbury, and Koshland.
Kounnas, M. *See* FitzGerald, Fryling, Zdanovsky, Saelinger, Kounnas, Winkles, Strickland, and Leppla.
Koutoulis, A. *See* Wilkerson, King, Koutoulis, Pazour, and Witman.
Koval, M., Geist, S. T., Westphale, E. M., Kemendy, A. E., Civitelli, R., Beyer, E. C., and Steinberg, T. H. Transfected connexin45 alters gap junction permeability in cells expressing endogenous connexin43. 130:987.
Koyama, E. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.
Kozlowska, E. *See* Langholz, Röckel, Mauch, Kozlowska, Bank, Krieg, and Eckes.
Kozminski, K. G., Beech, P. L., and Rosenbaum, J. L. The *Chlamydomonas* kinesin-like protein FLA10 is involved in motility associated with the flagellar membrane. 131:1517.
Kozopas, K. M. *See* Yang, Kozopas, and Craig.
Krane, S. *See* Liu, Wu, Byrne, Jeffrey, Krane, and Jaenisch.
Kranenburg, O., Scharnhorst, V., Van der Eb, A. J., and Zantema, A. Inhibition of cyclin-dependent kinase activity triggers neuronal differentiation of mouse neuroblastoma cells. 131:227.
Krebs, E. G. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Kreis, T. E. *See* Masson and Kreis.
— *See* Nakamura, Rabouille, Watson, Nilsson, Hui, Slusarewicz, Kreis, and Warren.
Kreitmeier, M., Gerisch, G., Heizer, C., and Müller-Taubenberger, A. A talin homologue of *Dictyostelium* rapidly assembles at the leading edge of cells in response to chemoattractant. 129:179.
Krieg, T. *See* Langholz, Röckel, Mauch, Kozlowska, Bank, Krieg, and Eckes.
Krimkevich, Y. I. *See* Marshall, Krimkevich, Lark, Dyer, Veenhuis, and Goodman.
Kronebusch, P. J. *See* Zhai, Kronebusch, and Borisy.
Kruth, H. S., Skarlatos, S. I., Lilly, K., Chang, J., and Ifrim, I. Sequestration of acetylated LDL and cholesterol crystals by human monocyte-derived macrophages. 129:133.
Ku, N.-O., Michie, S., Oshima, R. G., and Omary, M. B. Chronic hepatitis, hepatocyte fragility, and increased soluble phosphoglycokeratins in transgenic mice expressing a keratin 18 conserved arginine mutant. 131:1303.
— *See* Liao, Lowthert, Ku, Fernandez, and Omary.
Kues, W. A., Brenner, H. R., Sakmann, B., and Witzemann, V. Local neurotrophic repression of gene transcripts encoding fetal AChRs at rat neuromuscular synapses. 130:949.
Kuffner, T. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.
Kundra, V., Anand-Apte, B., Feig, L. A., and Zetter, B. R. The chemotactic response to PDGF-BB: Evidence of a role for ras. 130: 725.
Kung, C. *See* Loukin and Kung.
Kunimoto, M. A neuron-specific isoform of brain ankyrin, 440-kD ankyrin$_B$, is targeted to the axons of rat cerebellar neurons. 131:1821.
Kunkel, L. M. *See* Ahn and Kunkel.
Küntzel, H. *See* Farkasovsky and Küntzel.
Kurihara, L. J. *See* Gammie, Kurihara, Vallee, and Rose.
Kurisu, K. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.
Kuriyama, R., Kofron, M., Essner, R., Kato, T., Dragas-Granoic, S., Omoto, C. K., and Khodjakov, A. Characterization of a minus end–directed kinesin-like motor protein from cultured mammalian cells. 129:1049.
Kurjan, J. *See* Lu, Montijn, Brown, Klis, Kurjan, Bussey, and Lipke.
Kuroki, T. *See* Tagawa, Kuroki, Vogt, and Chida.
Kuspa, A. *See* Segall, Kuspa, Shaulsky, Ecke, Maeda, Gaskins, Firtel, and Loomis.
Küssel, P., and Frasch, M. Pendulin, a *Drosophila* protein with cell cycle-dependent nuclear localization, is required for normal cell proliferation. 129:1491.
Kusumi, A. *See* Sako and Kusumi.
Kuszak, J. R. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Kwiatkowska, K. *See* Muallem, Kwiatkowska, Xu, and Yin.
— *See* Sun, Kwiatkowska, Wooten, and Yin.
Kyrion, G. *See* Cockell, Palladino, Laroche, Kyrion, Liu, Lustig, and Gasser.

L

Labriola, C., Cazzulo, J. J., and Parodi, A. J. Retention of glucose units added by the UDP-GLC: Glycoprotein glucosyltransferase delays exit of glycoproteins from the endoplasmic reticulum. 130:771.
Lach, B. *See* Slack, Skerjanc, Lach, Craig, Jardine, and McBurney.
Lacroix, J.-C. *See* Bellini, Lacroix, and Gall.
LaFlamme, S. E. *See* Blystone, Lindberg, LaFlamme, and Brown.
Lafont, F. *See* Fiedler, Lafont, Parton, and Simons.
Laird, D. W., Castillo, M., and Kasprzak, L. Gap junction turnover, intracellular trafficking, and phosphorylation of connexin43 in brefeldin A-treated rat mammary tumor cells. 131:1193.
Lamaze, C., and Schmid, S. L. Recruitment of epidermal growth factor receptors into coated pits requires their activated tyrosine kinase. 129:47.
Lamb, N. *See* Poulat, Girard, Chevron, Gozé, Rebillard, Calas, Lamb, and Berta.
Lamb, N. J. C. *See* Turowski, Fernandez, Favre, Lamb, and Hemmings.
Lamblin, D. *See* Poliard, Nifuji, Lamblin, Plee, Forest, and Kellermann.
Lamond, A. I. *See* Bohmann, Ferreira, and Lamond.
Lamping, E. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Lampugnani, M. G., Corada, M., Caveda, L., Breviario, F., Ayalon, O., Geiger, B., and Dejana, E. The molecular organization of endothelial cell to cell junctions: Differential association of plakoglobin, β-catenin, and α-catenin with vascular endothelial cadherin (VE-cadherin). 129:203.
Landfear, S. M. *See* Piper, Xu, Russell, Little, and Landfear.
Lang, J. *See* Sadoul, Lang, Montecucco, Weller, Regazzi, Catsicas, Wollheim, and Halban.
Lange, B. M. H., and Gull, K. A molecular marker for centriole maturation in the mammalian cell cycle. 130:919.
Lange, C. *See* de Hoop, von Poser, Lange, Ikonen, Hunziker, and Dotti.
Langholz, O., Röckel, D., Mauch, C., Kozlowska, E., Bank, I., Krieg, T., and Eckes, B. Collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by $\alpha1\beta1$ and $\alpha2\beta1$ integrins. 131:1903.
Lardelli, M. *See* Mitsiadis, Lardelli, Lendahl, and Thesleff.
Lark, R. H. *See* Marshall, Krimkevich, Lark, Dyer, Veenhuis, and Goodman.
Larkin, J. M. *See* Roettger, Rentsch, Pinon, Holicky, Hadac, Larkin, and Miller.
Laroche, T. *See* Cockell, Palladino, Laroche, Kyrion, Liu, Lustig, and Gasser.
LaRochelle, W. J., Dirsch, O. R., Finch, P. W., Cheon, H.-G., May, M., Marchese, C., Pierce, J. H., and Aaronson, S. A. Specific receptor detection by a functional keratinocyte growth factor–immunoglobulin chimera. 129:357.
Larsson, E. *See* Durbeej, Larsson, Ibraghimov-Beskrovnaya, Roberds, Campbell, and Ekblom.
Laszlo, L. *See* Taraboulos, Scott, Semenov, Avraham, Laszlo, and Prusiner.
Lauffer, L. *See* Miller, Tajima, Lauffer, and Walter.
Lazarow, P. B. *See* Zhang and Lazarow.
Lazzarini, R. A. *See* Tu, Elder, Lazzarini, Nelson, Trojanowski, and Lee.
Lecoeur, H. *See* Petit, Lecoeur, Zorn, Dauguet, Mignotte, and Gougeon.
Lee, E. Y. *See* Albers, Davis, Perrone, Lee, Liu, and Vore.
Lee, G. *See* Brandt, Léger, and Lee.
Lee, J. K. *See* Deng, Lee, Goldstein, and Branton.
Lee, K. *See* Schumacher, Lee, Edelhoff, and Braun.
Lee, M. S. *See* Corbett, Koepp, Schlenstedt, Lee, Hopper, and Silver.
Lee, S.-H. *See* Lin, Lee, Narayanan, Baraban, Hardwick, and Ratan.
Lee, V. M.-Y. *See* Tu, Elder, Lazzarini, Nelson, Trojanowski, and Lee.
Lefebvre, V., Garofalo, S., and de Crombrugghe, B. Type X collagen gene expression in mouse chondrocytes immortalized by a temperature-sensitive simian virus 40 large tumor antigen. 128:239.
Legan, P. K. *See* Killick, Legan, Malenczak, and Richardson.

Léger, J. *See* Brandt, Léger, and Lee.
Leib, M. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Leier, I. *See* Mayer, Kartenbeck, Büchler, Jedlitschky, Leier, and Keppler.
Leijendekker, R. *See* Raposo, van Santen, Leijendekker, Geuze, and Ploegh.
Leitenberg, D. *See* Pfau, Leitenberg, Rinder, Smith, Pardi, and Bender.
Lencer, W. I., Constable, C., Moe, S., Jobling, M. G., Webb, H. M., Ruston, S., Madara, J. L., Hirst, T. R., and Holmes, R. K. Targeting of cholera toxin and *Escherichia coli* heat labile toxin in polarized epithelia: Role of COOH-terminal KDEL. 131:951.
Lendahl, U. *See* Frisén, Johansson, Török, Risling, and Lendahl.
— *See* Mitsiadis, Lardelli, Lendahl, and Thesleff.
— *See* Timmusk, Lendahl, Funakoshi, Arenas, Persson, and Metsis.
Leopold, P. L. *See* Marsh, Leopold, Jones, and Maxfield.
Leppert, C. A. *See* Bastmeyer, Ott, Leppert, and Stuermer.
Leppla, S. *See* FitzGerald, Fryling, Zdanovsky, Saelinger, Kounnas, Winkles, Strickland, and Leppla.
Lesley, J. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Letourneur, F., Hennecke, S., Démollière, C., and Cosson, P. Steric masking of a dilysine endoplasmic reticulum retention motif during assembly of the human high affinity receptor for immunoglobulin E. 129:971.
Leung, K. K. H. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.
Leung-Hagesteijn, C. *See* St-Arnaud, Prud'homme, Leung-Hagesteijn, and Dedhar.
Levy, A. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.
Levy, M. A. *See* Haney, Levy, Strube, and Mueckler.
Lew, D. J., and Reed, S. I. A cell cycle checkpoint monitors cell morphogenesis in budding yeast. 129:739.
Lewis, R. S. *See* Fanger, Hoth, Crabtree, and Lewis.
Lewis Carl, S., Felix, K., Caswell, A. H., Brandt, N. R., Ball, W. J., Jr., Vaghy, P. L., Meissner, G., and Ferguson, D. G. Immunolocalization of sarcolemmal dihydropyridine receptor and sarcoplasmic reticular triadin and ryanodine receptor in rabbit ventricle and atrium. 129:673.
Li, Q., and Joshi, H. C. γ-Tubulin is a minus end-specific microtubule binding protein. 131:207.
Li, R., Xie, J., Kantor, C., Koistinen, V., Altieri, D. C., Nortamo, P., and Gahmberg, C. G. A peptide derived from the intercellular adhesion molecule-2 regulates the avidity of the leukocyte integrins CD11b/CD18 and CD11c/CD18. 129:1143.
—, **Zheng, Y., and Drubin, D. G.** Regulation of cortical actin cytoskeleton assembly during polarized cell growth in budding yeast. 128:599.
Li, W.-C., Kuszak, J. R., Dunn, K., Wang, R.-R., Ma, W., Wang, G.-M., Spector, A., Leib, M., Cotliar, A. M., Weiss, M., Espy, J., Howard, G., Farris, R. L., Auran, J., Donn, A., Hofeldt, A., Mackay, C., Merriam, J., Mittl, R., and Smith, T. R. Lens epithelial cell apoptosis appears to be a common cellular basis for non-congenital cataract development in humans and animals. 130:169.
Li, X. *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.
Liao, H., Winkfein, R. J., Mack, G., Rattner, J. B., and Yen, T. J. CENP-F is a protein of the nuclear matrix that assembles onto kinetochores at late G2 and is rapidly degraded after mitosis. 130:507.
Liao, J., Lowthert, L. A., Ku, N.-O., Fernandez, R., and Omary, M. B. Dynamics of human keratin 18 phosphorylation: Polarized distribution of phosphorylated keratins in simple epithelial tissues. 131:1291.
Liau, G. *See* Godyna, Liau, Popa, Stefansson, and Argraves.
Lichenstein, H. S. *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.
Lichtenberg-Fraté, H. *See* Elfgang, Eckert, Lichtenberg-Fraté, Butterweck, Traub, Klein, Hülser, and Willecke.
Lieb, M. *See* Hémar, Subtil, Lieb, Morelon, Hellio, and Dautry-Varsat.
Lilien, J. *See* Balsamo, Ernst, Zanin, Hoffman, and Lilien.
Lill, R. *See* Schlenstedt, Harris, Risse, Lill, and Silver.
Lilly, K. *See* Kruth, Skarlatos, Lilly, Chang, and Ifrim.
Lilly, P. J., and Devreotes, P. N. Chemoattractant and GTPγS-mediated stimulation of adenylyl cyclase in *Dictyostelium* requires translocation of CRAC to membranes. 129:1659.
Lin, C. Q., Dempsey, P. J., Coffey, R. J., and Bissell, M. J. Extracellular matrix regulates whey acidic protein gene expression by suppression of TGF-α in mouse mammary epithelial cells: Studies in culture and in transgenic mice. 129:1115.
Lin, D. C. *See* Chuang, Lin, and Lin.
Lin, J. J.-C. *See* Warren, Lin, McDermott, and Lin.
Lin, J. L.-C. *See* Warren, Lin, McDermott, and Lin.
Lin, K.-I., Lee, S.-H., Narayanan, R., Baraban, J. M., Hardwick, J. M., and Ratan, R. R. Thiol agents and Bcl-2 identify an alphavirus-induced apoptotic pathway that requires activation of the transcription factor NF-kappa B. 131:1149.
Lin, S. *See* Chuang, Lin, and Lin.
Lindau, M. *See* Lollike, Borregaard, and Lindau.
Lindberg, F. P. *See* Blystone, Lindberg, LaFlamme, and Brown.
Lindberg, I. *See* Zhu and Lindberg.
Lindsey, D. F. *See* Yuen, Jain, Bishop, Lindsey, Deery, Van Haastert, and Gomer.
Lipke, P. N. *See* Benghezal, Lipke, and Conzelmann.
— *See* Lu, Montijn, Brown, Klis, Kurjan, Bussey, and Lipke.
Lippincott-Schwartz, J., Cole, N. B., Marotta, A., Conrad, P. A., and Bloom, G. S. Kinesin is the motor for microtubule-mediated Golgi-to-ER membrane traffic. 128:293. Correction. 128:989, 129:893.
Lithgow, T. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Litt, R. *See* Jedd, Richardson, Litt, and Segev.
Litt, R. J. *See* Jones, Litt, Richardson, and Segev.
Little, B. M. *See* Piper, Xu, Russell, Little, and Landfear.
Liu, C. *See* Cockell, Palladino, Laroche, Kyrion, Liu, Lustig, and Gasser.
Liu, X., Wu, H., Byrne, M., Jeffrey, J., Krane, S., and Jaenisch, R. A targeted mutation at the known collagenase cleavage site in mouse type I collagen impairs tissue remodeling. 130:227.
Liu, Y. *See* Albers, Davis, Perrone, Lee, Liu, and Vore.
— *See* Mark, Liu, Wong, Hinds, and Storm.
Lloyd, C., Yu, Q.-C., Cheng, J., Turksen, K., Degenstein, L., Hutton, E., and Fuchs, E. The basal keratin network of stratified squamous epithelia: Defining K15 function in the absence of K14. 129:1329.
Lloyd, M. *See* Ward, Perou, Lloyd, and Kaplan.
Lo, C. W. *See* Strutz, Okada, Lo, Danoff, Carone, Tomaszewski, and Neilson.
— *See* Sullivan and Lo.
Loeb, J. A., and Fischbach, G. D. ARIA can be released from extracellular matrix through cleavage of a heparin-binding domain. 130:127.
Lollike, K., Borregaard, N., and Lindau, M. The exocytotic fusion pore of small granules has a conductance similar to an ion channel. 129:99.
Lombillo, V. A., Nislow, C., Yen, T. J., Gelfand, V. I., and McIntosh, J. R. Antibodies to the kinesin motor domain and CENP-E inhibit microtubule depolymerization-dependent motion of chromosomes in vitro. 128:107.
Longo, F. M. *See* Zhang and Longo.
Loomis, W. F. *See* Segall, Kuspa, Shaulsky, Ecke, Maeda, Gaskins, Firtel, and Loomis.
Lorenzen, J. A., Dadabay, C. Y., and Fischer, E. H. COOH-terminal sequence motifs target the T cell protein tyrosine phosphatase to the ER and nucleus. 131:631.
Lorenzon, P., Zacchetti, D., Codazzi, F., Fumagalli, G., Meldolesi, J., and Grohovaz, F. Ca^{2+} waves in PC12 neurites: A bidirectional, receptor-oriented form of Ca^{2+} signaling. 129:797.
Lotz, M. *See* Geng and Lotz.
Loukin, S., and Kung, C. Manganese effectively supports yeast cell-cycle progression in place of calcium. 131:1025.
Lovell-Badge, R. H. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.
Lowe, A. W. *See* Mays, Siemers, Fritz, Lowe, van Meer, and Nelson.
Lowthert, L. A. *See* Liao, Lowthert, Ku, Fernandez, and Omary.
Lu, C.-F., Montijn, R. C., Brown, J. L., Klis, F., Kurjan, J., Bussey, H., and Lipke, P. N. Glycosyl phosphatidylinositol-dependent cross-linking of α-agglutinin and β1,6-glucan in the *Saccharomyces cerevisiae* cell wall. 128:333.

Lu, F. M. *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.

Lu, P. J., Lu, Q. L., Rughetti, A., and Taylor-Papadimitriou, J. *bcl-2* overexpression inhibits cell death and promotes the morphogenesis, but not tumorigenesis of human mammary epithelial cells. 129:1363. Correction. 131:1123.

Lu, Q. L. *See* Lu, Lu, Rughetti, and Taylor-Papadimitriou.

Lu, Y. *See* Fan, Lu, Wu, DeBlasio, Koff, and Mendelsohn.

Ludmann, S. *See* McGrail, Gepner, Silvanovich, Ludmann, Serr, and Hays.

Luini, A. *See* Castellino, Ono, Matsumura, and Luini.

Lum, P. Y., and Wright, R. Degradation of HMG-CoA reductase-induced membranes in the fission yeast, *Schizosaccharomyces pombe*. 131:81.

Lumb, M. J. *See* Motley, Lumb, Oatey, Jennings, De Zoysa, Wanders, Tabak, and Danpure.

Luna, E. J. *See* Shutt, Wessels, Wagenknecht, Chandrasekhar, Hitt, Luna, and Soll.

Luo, L. *See* Eaton, Auvinen, Luo, Jan, and Simons.

Lussier, M., Sdicu, A.-M., Ketela, T., and Bussey, H. Localization and targeting of the *Saccharomyces cerevisiae* Kre2p/Mntlp α1,2-mannosyltransferase to a *medial*-Golgi compartment. 131:913.

Lustig, A. J. *See* Cockell, Palladino, Laroche, Kyrion, Liu, Lustig, and Gasser.

Lux, S. E. *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.

Lyman, S. K., and Schekman, R. Interaction between BiP and Sec63p is required for the completion of protein translocation into the ER of *Saccharomyces cerevisiae*. 131:1163.

Lymboussakis, A. *See* Västrik, Kaipainen, Penttilä, Lymboussakis, Alitalo, Parvinen, and Alitalo.

M

Ma, W. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.

Macaulay, C. *See* Powers, Macaulay, Masiarz, and Forbes.

Mack, G. *See* Liao, Winkfein, Mack, Rattner, and Yen.

Mackay, C. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.

Madara, J. L. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.

— *See* McCormick, Hofman, Kim, Carnes, Miller, and Madara.

Maeda, M. *See* Segall, Kuspa, Shaulsky, Ecke, Maeda, Gaskins, Firtel, and Loomis.

Maher, P. A. *See* Hanneken, Maher, and Baird.

Mailleux, P. *See* Allinquant, Hantraye, Mailleux, Moya, Bouillot, and Prochiantz.

Malenczak, C. *See* Killick, Legan, Malenczak, and Richardson.

Malhotra, V. *See* Acharya, McCaffery, Jacobs, and Malhotra.

Mamay, C. L. *See* Winey, Mamay, O'Toole, Mastronarde, Giddings, McDonald, and McIntosh.

Mammarella, S. *See* Giannini, Conti, Mammarella, Scrobogna, and Sorrentino.

Mandelkow, E. *See* Song and Mandelkow.

Mangeat, P. *See* Martin, Andréoli, Sahuquet, Montcourrier, Algrain, and Mangeat.

Marchand, J.-B., Moreau, P., Paoletti, A., Cossart, P., Carlier, M.-F., and Pantaloni, D. Actin-based movement of listeria monocytogenes: Actin assembly results from the local maintenance of uncapped filament barbed ends at the bacterium surface. 130: 331.

Marchese, C. *See* LaRochelle, Dirsch, Finch, Cheon, May, Marchese, Pierce, and Aaronson.

Marchisio, P. C. *See* Zambruno, Marchisio, Marconi, Vaschieri, Melchiori, Giannetti, and De Luca.

Marconi, A. *See* Zambruno, Marchisio, Marconi, Vaschieri, Melchiori, Giannetti, and De Luca.

Marelli, M. *See* Aitchison, Rout, Marelli, Blobel, and Wozniak.

Margelot, K. *See* Matera, Frey, Margelot, and Wolin.

Margolis, R. L. *See* Martineau, Andreassen, and Margolis.

Mark, M. D., Liu, Y., Wong, S. T., Hinds, T. R., and Storm, D. R. Stimulation of neurite outgrowth in PC12 cells by EGF and KCl depolarization: A Ca^{2+}-independent phenomenon. 130:701.

Marks, M. S., Roche, P. A., van Donselaar, E., Woodruff, L., Peters, P. J., and Bonifacino, J. S. A lysosomal targeting signal in the cytoplasmic tail of the β chain directs HLA-DM to MHC class II compartments. 131:351.

Markwald, R. R. *See* Byeon, Sugi, Markwald, and Hoffman.

Maroder, M. *See* Gnessi, Emidi, Jannini, Carosa, Maroder, Arizzi, Ulisse, and Spera.

Marotta, A. *See* Lippincott-Schwartz, Cole, Marotta, Conrad, and Bloom.

Marrs, J. A., Andersson-Fisone, C., Jeong, M. C., Cohen-Gould, L., Zurzolo, C., Nabi, I. R., Rodriguez-Boulan, E., and Nelson, W. J. Plasticity in epithelial cell phenotype: Modulation by expression of different cadherin cell adhesion molecules. 129:507.

Marschall, L. G., and Clarke, L. A novel *cis*-acting centromeric DNA element affects *S. pombe* centromeric chromatin structure at a distance. 128:445.

Marsh, B. J., Alm, R. A., McIntosh, S. R., and James, D. E. Molecular regulation of GLUT-4 targeting in 3T3-L1 adipocytes. 130: 1081.

Marsh, E. W., Leopold, P. L., Jones, N. L., and Maxfield, F. R. Oligomerized transferrin receptors are selectively retained by a lumenal sorting signal in a long-lived endocytic recycling compartment. 129:1509.

Marshall, P. A., Krimkevich, Y. I., Lark, R. H., Dyer, J. M., Veenhuis, M., and Goodman, J. M. Pmp27 promotes peroxisomal proliferation. 129:345.

Marszalek, J. *See* Wong, Marszalek, Crawford, Xu, Hsieh, Griffin, and Cleveland.

Marti, A. *See* Feng, Marti, Jehn, Altermatt, Chicaiza, and Jaggi.

Martin, K. H. *See* Turner, Minkoff, Martin, Misra, and Swenson.

Martin, M., Andréoli, C., Sahuquet, A., Montcourrier, P., Algrain, M., and Mangeat, P. Ezrin NH_2-terminal domain inhibits the cell extension activity of the COOH-terminal domain. 128:1081.

Martineau, S. N., Andreassen, P. R., and Margolis, R. L. Delay of HeLa cell cleavage into interphase using dihydrocytochalasin B: Retention of a postmitotic spindle and telophase disc correlates with synchronous cleavage recovery. 131:191.

Martinez, J. *See* Chalupowicz, Chowdhury, Bach, Barsigian, and Martínez.

Martinou, I., Fernandez, P.-A., Missotten, M., White, E., Allet, B., Sadoul, R., and Martinou, J.-C. Viral proteins E1B19K and p35 protect sympathetic neurons from cell death induced by NGF deprivation. 128:201.

Martinou, J.-C. *See* Martinou, Fernandez, Missotten, White, Allet, Sadoul, and Martinou.

Masiarz, F. R. *See* Powers, Macaulay, Masiarz, and Forbes.

Massagué, J. *See* Arribas and Massagué.

Masson, D., and Kreis, T. E. Binding of E-MAP-115 to microtubules is regulated by cell cycle–dependent phosphorylation. 131:1015.

Mastick, C. C., Brady, M. J., and Saltiel, A. R. Insulin stimulates the tyrosine phosphorylation of caveolin. 129:1523.

Mastronarde, D. N. *See* Winey, Mamay, O'Toole, Mastronarde, Giddings, McDonald, and McIntosh.

Mata, J. *See* Verde, Mata, and Nurse.

Matera, A. G., Frey, M. R., Margelot, K., and Wolin, S. L. A perinucleolar compartment contains several RNA polymerase III transcripts as well as the polypyrimidine tract-binding protein, hnRNP I. 129:1181. Correction. 130:497.

Matikainen, S. *See* Zheng, Saksela, Matikainen, and Vaheri.

Matozaki, T. *See* Nakamura, Yamamoto, Nishitani, Matozaki, Suzuki, Wakabayashi, Shigekawa, and Goshima.

Matsudaira, P. *See* Way, Sanders, Garcia, Sakai, and Matsudaira.

Matsumoto, K. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.

Matsumura, F. *See* Castellino, Ono, Matsumura, and Luini.

Matsumura, T. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.

Matsuoka, K., Bassham, D. C., Raikhel, N. V., and Nakamura, K. Different sensitivity to wortmannin of two vacuolar sorting signals indicates the presence of distinct sorting machineries in tobacco cells. 130:1307.

Matsuyoshi, N. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
Matthison, M. *See* Koch, Bohrmann, Matthison, Hagios, Trueb, and Chiquet.
Matzner, M. *See* Spang, Courtney, Grein, Matzner, and Schiebel.
Mauch, C. *See* Langholz, Röckel, Mauch, Kozlowska, Bank, Krieg, and Eckes.
Mauco, G. *See* Guinebault, Payrastre, Racaud-Sultan, Mazarguil, Breton, Mauco, Plantavid, and Chap.
Maul, G. G. *See* Korioth, Gieffers, Maul, and Frey.
Maxfield, F. R. *See* Ghosh and Maxfield.
— *See* Marsh, Leopold, Jones, and Maxfield.
— *See* van Weert, Dunn, Geuze, Maxfield, and Stoorvogel.
May, G. S. *See* McGoldrick, Gruver, and May.
May, M. *See* LaRochelle, Dirsch, Finch, Cheon, May, Marchese, Pierce, and Aaronson.
Mayer, R., Kartenbeck, J., Büchler, M., Jedlitschky, G., Leier, I., and Keppler, D. Expression of the *MRP* gene-encoded conjugate export pump in liver and its selective absence from the canalicular membrane in transport-deficient mutant hepatocytes. 131:137.
Mayinger, P., Bankaitis, V. A., and Meyer, D. I. Sac1p mediates the adenosine triphosphate transport into yeast endoplasmic reticulum that is required for protein translocation. 131:1377.
Mays, R. W., Siemers, K. A., Fritz, B. A., Lowe, A. W., van Meer, G., and Nelson, W. J. Hierarchy of mechanisms involved in generating Na/K-ATPase polarity in MDCK epithelial cells. 130: 1105.
Mazarguil, H. *See* Guinebault, Payrastre, Racaud-Sultan, Mazarguil, Breton, Mauco, Plantavid, and Chap.
McBurney, M. W. *See* Slack, Skerjanc, Lach, Craig, Jardine, and McBurney.
McCaffery, J. M. *See* Acharya, McCaffery, Jacobs, and Malhotra.
McCarthy, J. B. *See* Huhtala, Humphries, McCarthy, Tremble, Werb, and Damsky.
McCollum, D., Balasubramanian, M. K., Pelcher, L. E., Hemmingsen, S. M., and Gould, K. L. *Schizosaccharomyces pombe cdc4*$^{+}$ gene encodes a novel EF-hand protein essential for cytokinesis. 130:651.
McCormick, B. A., Hofman, P. M., Kim, J., Carnes, D. K., Miller, S. I., and Madara, J. L. Surface attachment of *Salmonella typhimurium* to intestinal epithelia imprints the subepithelial matrix with gradients chemotactic for neutrophils. 131:1599.
McCrea, P. *See* Funayama, Fagotto, McCrea, and Gumbiner.
McCurrach, M. *See* Taneja, Schalling, Housman, and Singer.
McDermott, J. P. *See* Warren, Lin, McDermott, and Lin.
McDonald, K. L. *See* Winey, Mamay, O'Toole, Mastronarde, Giddings, McDonald, and McIntosh.
McEver, R. P. *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.
— *See* Patel, Nollert, and McEver.
McGoldrick, C. A., Gruver, C., and May, G. S. *myoA* of *Aspergillus nidulans* encodes an essential myosin I required for secretion and polarized growth. 128:577.
McGrail, M., Gepner, J., Silvanovich, A., Ludmann, S., Serr, M., and Hays, T. S. Regulation of cytoplasmic dynein function in vivo by the *Drosophila* glued complex. 131:411.
McIntosh, J. R., and West, R. R. A cell biological perspective on genome research. 131:1361.
— *See* Lombillo, Nislow, Yen, Gelfand, and McIntosh.
— *See* Olson, McIntosh, and Olmsted.
McIntosh, J. Richard. *See* Winey, Mamay, O'Toole, Mastronarde, Giddings, McDonald, and McIntosh.
McIntosh, S. R. *See* Marsh, Alm, McIntosh, and James.
McKeon, F. *See* Shibasaki and McKeon.
McNeil, J. A. *See* Xing, Johnson, Moen, McNeil, and Bentley Lawrence.
McNeil, P. L. *See* Miyake and McNeil.
McPherson, P. S. *See* Chilcote, Galli, Mundigl, Edelmann, McPherson, Takei, and De Camilli.
— *See* Garcia, McPherson, Chilcote, Takei, and De Camilli.
Mechler, B. M. *See* Török, Strand, Schmitt, Tick, Török, Kiss, and Mechler.
Meco, D. *See* Screpanti, Scarpa, Meco, Bellavia, Stuppia, Frati, Modesti, and Gulino.
Meda, P. *See* Vozzi, Ullrich, Charollais, Philippe, Orci, and Meda.
Medina, C. *See* Berthiaume, Medina, and Swanson.
Mégarbané, B. *See* Benmerah, Gagnon, Bègue, Mégarbané, Dautry-Varsa, and Cerf-Bensussan.
Mehlin, H., Daneholt, B., and Skoglund, U. Structural interaction between the nuclear pore complex and a specific translocating RNP particle. 129:1205.
Meier, E., Miller, B. R., and Forbes, D. J. Nuclear pore complex assembly studied wit.. a biochemical assay for annulate lamellae formation. 129:1459.
Meier, T., Perez, G. M., and Wallace, B. G. Immobilization of nicotinic acetylcholine receptors in mouse C2 myotubes by agrin-induced protein tyrosine phosphorylation. 131:441.
Meissner, G. *See* Lewis Carl, Felix, Caswell, Brandt, Ball, Vaghy, Meissner, and Ferguson.
Mekada, E. *See* Higashiyama, Iwamoto, Goishi, Raab, Taniguchi, Klagsbrun, and Mekada.
— *See* Nakamura, Iwamoto, and Mekada.
Melchior, F., Guan, T., Yokoyama, N., Nishimoto, T., and Gerace, L. GTP hydrolysis by Ran occurs at the nuclear pore complex in an early step of protein import. 131:571.
Melchiori, A. *See* Zambruno, Marchisio, Marconi, Vaschieri, Melchiori, Giannetti, and De Luca.
Meldolesi, J. *See* Bastianutto, Clementi, Codazzi, Podini, De Giorgi, Rizzuto, Meldolesi, and Pozzan.
— *See* Lorenzon, Zacchetti, Codazzi, Fumagalli, Meldolesi, and Grohovaz.
— *See* Raichman, Panzeri, Clementi, Papazafiri, Eckley, Clegg, Villa, and Meldolesi.
Melikyan, G. B., White, J. M., and Cohen, F. S. GPI-anchored influenza hemagglutinin induces hemifusion to both red blood cell and planar bilayer membranes. 131:679.
Mendelsohn, J. *See* Fan, Lu, Wu, DeBlasio, Koff, and Mendelsohn.
Meng, C. *See* Chang and Meng.
Merlo, G. R., Basolo, F., Fiore, L., Duboc, L., and Hynes, N. E. p53-dependent and p53-independent activation of apoptosis in mammary epithelial cells reveals a survival function of EGF and insulin. 128:1185.
Mermall, V., and Miller, K. G. The 95F unconventional myosin is required for proper organization of the *Drosophila* syncytial blastoderm. 129:1575.
Merriam, J. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Metsis, M. *See* Timmusk, Lendahl, Funakoshi, Arenas, Persson, and Metsis.
Metz, C. N. *See* Einheber, Hannocks, Metz, Rifkin, and Salzer.
Meyer, D. *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Meyer, D. I. *See* Mayinger, Bankaitis, and Meyer.
— *See* Wanker, Sun, Savitz, and Meyer.
Michalopoulos, G. K. *See* Zarnegar and Michalopoulos.
Michie, S. *See* Ku, Michie, Oshima, and Omary.
Mickey, B., and Howard, J. Rigidity of microtubules is increased by stabilizing agents. 130:909.
Miesenböck, G., and Rothman, J. E. The capacity to retrieve escaped ER proteins extends to the *trans*-most cisterna of the Golgi stack. 129:309.
Mignatti, P. *See* Bikfalvi, Klein, Pintucci, Quarto, Mignatti, and Rifkin.
Mignotte, B. *See* Petit, Lecoeur, Zorn, Dauguet, Mignotte, and Gougeon.
Millan, J. A. *See* Wang, Millan, Cox, Der, Rapp, Beck, Zha, and Reed.
Miller, B. R. *See* Meier, Miller, and Forbes.
Miller, D. D. *See* Garcia-Blanco, Miller, and Sheetz.
Miller, F. J. *See* Sluder, Thompson, Rieder, and Miller.
Miller, J. *See* Arneson and Miller.
Miller, J. D., Tajima, S., Lauffer, L., and Walter, P. The β subunit of the signal recognition particle receptor is a transmembrane GTPase that anchors the α subunit, a peripheral membrane GTPase, to the endoplasmic reticulum membrane. 128:273.
Miller, K. G., and Kiehart, D. P. Fly division. 131:1.
— *See* Mermall and Miller.
Miller, L. J. *See* Roettger, Rentsch, Hadac, Hellen, Burghardt, and Miller.
— *See* Roettger, Rentsch, Pinon, Holicky, Hadac, Larkin, and Miller.
Miller, S. I. *See* McCormick, Hofman, Kim, Carnes, Miller, and Madara.
Milner, T. A. *See* Spinardi, Einheber, Cullen, Milner, and Giancotti.
Minkoff, C. G. *See* Turner, Minkoff, Martin, Misra, and Swenson.
Mischke, M. *See* Chant, Mischke, Mitchell, Herskowitz, and Pringle.
Misra, R. *See* Turner, Minkoff, Martin, Misra, and Swenson.

Missotten, M. *See* Martinou, Fernandez, Missotten, White, Allet, Sadoul, and Martinou.
Misteli, T., and Warren, G. A role for tubular networks and a COP I-independent pathway in the mitotic fragmentation of Golgi stacks in a cell-free system. 130:1027.
— *See* Rabouille, Misteli, Watson, and Warren.
Mitchell, E. *See* Chant, Mischke, Mitchell, Herskowitz, and Pringle.
Mitchison, T. J. *See* Cramer and Mitchison.
— *See* Desai and Mitchison.
— *See* Wordeman and Mitchison.
Mitsiadis, T. A., Lardelli, M., Lendahl, U., and Thesleff, I. Expression of *Notch 1, 2,* and *3* is regulated by epithelial-mesenchymal interactions and retinoic acid in the developing mouse tooth and associated with determination of ameloblast cell fate. 130:407.
—, **Muramatsu, T., Muramatsu, H., and Thesleff, I.** Midkine (MK), a Heparin-binding growth/differentiation factor, is regulated by retinoic acid and epithelial–mesenchymal interactions in the developing mouse tooth, and affects cell proliferation and morphogenesis. 129:267.
Mitsuhashi, Y. *See* Rak, Mitsuhashi, Erdos, Huang, Filmus, and Kerbel.
Mittl, R. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Miyake, K., and McNeil, P. L. Vesicle accumulation and exocytosis at sites of plasma membrane disruption. 131:1737.
— *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Miyamoto, S., Teramoto, H., Coso, O. A., Silvio Gutkind, J., Burbelo, P. D., Akiyama, S. K., and Yamada, K. M. Integrin function: Molecular hierarchies of cytoskeletal and signaling molecules. 131:791.
Miyazawa, K. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
Miyazono, K. *See* Dallas, Miyazono, Skerry, Mundy, and Bonewald.
— *See* Yamashita, ten Dijke, Huylebroeck, Sampath, Andries, Smith, Heldin, and Miyazono.
Mobley, J. L. *See* Shimizu, Mobley, Finkelstein, and Chan.
Modesti, A. *See* Screpanti, Scarpa, Meco, Bellavia, Stuppia, Frati, Modesti, and Gulino.
Modrell, B. *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.
— *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.
Moe, S. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.
Moen, P. T., Jr. *See* Xing, Johnson, Moen, McNeil, and Bentley Lawrence.
Mohandas, N. *See* Discher, Winardi, Schischmanoff, Parra, Conboy, and Mohandas.
Montcourrier, P. *See* Martin, Andréoli, Sahuquet, Montcourrier, Algrain, and Mangeat.
Montecucco, C. *See* Sadoul, Lang, Montecucco, Weller, Regazzi, Catsicas, Wollheim, and Halban.
Monteiro, C. A. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Montijn, R. C. *See* Lu, Montijn, Brown, Klis, Kurjan, Bussey, and Lipke.
Moolenaar, W. H. *See* Gebbink, Zondag, Koningstein, Feiken, Wubbolts, and Moolenaar.
Moorby, C. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.
Moore, K. L., Patel, K. D., Bruehl, R. E., Fugang, L., Johnson, D. A., Lichenstein, H. S., Cummings, R. D., Bainton, D. F., and McEver, R. P. P-selectin glycoprotein ligand-1 mediates rolling of human neutrophils on P-selectin. 128:661.
Moorthy, S. *See* Hu, Moorthy, and Bennett.
Morano, K. A. *See* Harding, Morano, Scott, and Klionsky.
Moreau, P. *See* Marchand, Moreau, Paoletti, Cossart, Carlier, and Pantaloni.
Morelon, E. *See* Hémar, Subtil, Lieb, Morelon, Hellio, and Dautry-Varsat.
Morgan, A. *See* Chamberlain, Roth, Morgan, and Burgoyne.
Morgan, B. P. *See* van den Berg, Cinek, Hallett, Horejsi, and Morgan.
Moritz, M., Braunfeld, M. B., Fung, J. C., Sedat, J. W., Alberts, B. M., and Agard, D. A. Three-dimensional structural characterization of centrosomes from early *Drosophila* embryos. 130:1149.
Morris, J. H. *See* Venuti, Morris, Vivian, Olson, and Klein.
Morris, R. L., and Hollenbeck, P. J. Axonal transport of mitochondria along microtubules and F-actin in living vertebrate neurons. 131:1315.
Motley, A., Lumb, M. J., Oatey, P. B., Jennings, P. R., De Zoysa, P. A., Wanders, R. J. A., Tabak, H. F., and Danpure, C. J. Mammalian alanine/glyoxylate aminotransferase 1 is imported into peroxisomes via the PTS1 translocation pathway. Increased degeneracy and context specificity of the mammalian PTS1 motif and implications for the peroxisome-to-mitochondrion mistargeting of AGT in primary hyperoxaluria type 1. 131:95.
Moya, K. *See* Allinquant, Hantraye, Mailleux, Moya, Bouillot, and Prochiantz.
Muallem, S., Kwiatkowska, K., Xu, X., and Yin, H. L. Actin filament disassembly is a sufficient final trigger for exocytosis in nonexcitable cells. 128:589.
Mudge, A. W. *See* Cheng, Khan, and Mudge.
Mueckler, M. *See* Haney, Levy, Strube, and Mueckler.
Mueller, B. M. *See* Stahl and Mueller.
Müller, C. A. *See* Armeanu, Bühring, Reuss-Borst, Müller, and Klein.
Müller-Taubenberger, A. *See* Kreitmeier, Gerisch, Heizer, and Müller-Taubenberger.
Mullinger, A. M. *See* Giménez-Abián, Clarke, Mullinger, Downes, and Johnson.
Mumby, M. C. *See* Sontag, Nunbhakdi-Craig, Bloom, and Mumby.
Mundigl, O. *See* Chilcote, Galli, Mundigl, Edelmann, McPherson, Takei, and De Camilli.
Mundt, K. E. *See* Golsteyn, Mundt, Fry, and Nigg.
Mundy, G. R. *See* Dallas, Miyazono, Skerry, Mundy, and Bonewald.
Muramatsu, H. *See* Mitsiadis, Muramatsu, Muramatsu, and Thesleff.
Muramatsu, T. *See* Mitsiadis, Muramatsu, Muramatsu, and Thesleff.
Murofushi, H. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.
Murphy, E. C., III *See* Nicchitta, Murphy, Haynes, and Shelness.
Murphy, J. *See* Fässler, Pfaff, Murphy, Noegel, Johansson, Timpl, and Albrecht.
Murphy-Erdosh, C., Yoshida, C. K., Paradies, N., and Reichardt, L. F. The cadherin-binding specificities of B-cadherin and LCAM. 129:1379.
Murray, A. W. *See* Hardwick and Murray.
— *See* Kellogg, Kikuchi, Fujii-Nakata, Turck, and Murray.
— *See* Kellogg and Murray.
Mustonen, T., and Alitalo, K. Endothelial receptor tyrosine kinases involved in angiogenesis. 129:895.
Myles, D. G. *See* Wolfsberg, Primakoff, Myles, and White.
Myoukai, F. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.

N

Nabi, I. R. *See* Benlimame, Simard, and Nabi.
— *See* Demetriou, Nabi, Coppolino, Dedhar, and Dennis.
— *See* Marrs, Andersson-Fisone, Jeong, Cohen-Gould, Zurzolo, Nabi, Rodriguez-Boulan, and Nelson.
Nagafuchi, A. *See* Takeda, Nagafuchi, Yonemura, Tsukita, Behrens, Birchmeier, and Tsukita.
Naim, H. Y., Dodds, D. T., Brewer, C. B., and Roth, M. G. Apical and basolateral coated pits of MDCK cells differ in their rates of maturation into coated vesicles, but not in the ability to distinguish between mutant hemagglutinin proteins with different internalization signals. 129:1241.
Naito, I. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.
Nakagawa, T., Chen, J., Zhang, Z., Kanai, Y., and Hirokawa, N. Two distinct functions of the carboxyl-terminal tail domain of NF-M upon neurofilament assembly: Cross-bridge formation and longitudinal elongation of filaments. 129:411.
Nakamura, K., Iwamoto, R., and Mekada, E. Membrane-anchored heparin-binding EGF-like growth factor (HB-EGF) and diphtheria toxin receptor–associated protein (DRAP27)/CD9 form a complex with integrin $\alpha 3\beta 1$ at cell–cell contact sites. 129:1691.
— *See* Matsuoka, Bassham, Raikhel, and Nakamura.

Nakamura, N., Rabouille, C., Watson, R., Nilsson, T., Hui, N., Slusarewicz, P., Kreis, T. E., and Warren, G. Characterization of a *cis*-Golgi matrix protein, GM130. 131:1715.
Nakamura, T. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.
Nakamura, T. Y., Yamamoto, I., Nishitani, H., Matozaki, T., Suzuki, T., Wakabayashi, S., Shigekawa, M., and Goshima, K. Detachment of cultured cells from the substratum induced by the neutrophil-derived oxidant NH_2Cl: Synergistic role of phosphotyrosine and intracellular Ca^{2+} concentration. 131:509.
Nakata, T., and Hirokawa, N. Point mutation of adenosine triphosphate-binding motif generated rigor kinesin that selectively blocks anterograde lysosome membrane transport. 131:1039.
— *See* Yamazaki, Nakata, Okada, and Hirokawa.
Nangaku, M. *See* Noda, Sato-Yoshitake, Kondo, Nangaku, and Hirokawa.
Narayanan, R. *See* Lin, Lee, Narayanan, Baraban, Hardwick, and Ratan.
Neilson, E. G. *See* Strutz, Okada, Lo, Danoff, Carone, Tomaszewski, and Neilson.
Nelson, D. *See* Tu, Elder, Lazzarini, Nelson, Trojanowski, and Lee.
Nelson, W. J. *See* Marrs, Andersson-Fisone, Jeong, Cohen-Gould, Zurzolo, Nabi, Rodriguez-Boulan, and Nelson.
— *See* Mays, Siemers, Fritz, Lowe, van Meer, and Nelson.
Neugebauer, K. M., Stolk, J. A., and Roth, M. B. A conserved epitope on a subset of SR proteins defines a larger family of pre-mRNA splicing factors. 129:899.
Newport, J. *See* Yan and Newport.
Nicchitta, C. V., Murphy, E. C., III, Haynes, R., and Shelness, G. S. Stage- and ribosome-specific alterations in nascent chain–Sec61p interactions accompany translocation across the ER membrane. 129:957.
Nicklas, R. B., Ward, S. C., and Gorbsky, G. J. Kinetochore chemistry is sensitive to tension and may link mitotic forces to a cell cycle checkpoint. 130:929.
— *See* Zhang and Nicklas.
Nicolson, T. A., Weisman, L. S., Payne, G. S., and Wickner, W. T. A truncated form of the Pho80 cyclin redirects the Pho85 kinase to disrupt vacuole inheritance in *S. cerevisiae*. 130:835.
Niemann, C. *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Nieto, M. *See* del Pozo, Sánchez-Mateos, Nieto, and Sánchez-Madrid.
Nifuji, A. *See* Poliard, Nifuji, Lamblin, Plee, Forest, and Kellermann.
Nigg, E. A. *See* Golsteyn, Mundt, Fry, and Nigg.
Nilssen, Ø. *See* Bruckner-Tuderman, Nilssen, Zimmermann, Dours-Zimmermann, Kalinke, Gedde-Dahl, and Winberg.
Nilsson, T. *See* Nakamura, Rabouille, Watson, Nilsson, Hui, Slusarewicz, Kreis, and Warren.
Ninomiya, Y., Kagawa, M., Iyama, K., Naito, I., Kishiro, Y., Seyer, J. M., Sugimoto, M., Oohashi, T., and Sado, Y. Differential expression of two basement membrane collagen genes, COL4A6 and COL4A5, demonstrated by immunofluorescence staining using peptide-specific monoclonal antibodies. 130:1219.
Nishimoto, T. *See* Melchior, Guan, Yokoyama, Nishimoto, and Gerace.
Nishitani, H. *See* Nakamura, Yamamoto, Nishitani, Matozaki, Suzuki, Wakabayashi, Shigekawa, and Goshima.
Nislow, C. *See* Lombillo, Nislow, Yen, Gelfand, and McIntosh.
Noble, M. D. *See* Woolf, Kolatsi-Joannou, Hardman, Andermarcher, Moorby, Fine, Jat, Noble, and Gherardi.
Noda, T. *See* Takei, Harada, Takeda, Kobayashi, Terada, Noda, Takahashi, and Hirokawa.
Noda, Y., Sato-Yoshitake, R., Kondo, S., Nangaku, M., and Hirokawa, N. KIF2 is a new microtubule-based anterograde motor that transports membranous organelles distinct from those carried by kinesin heavy chain or KIF3A/B. 129:157.
Noegel, A. A. *See* Fässler, Pfaff, Murphy, Noegel, Johansson, Timpl, and Albrecht.
Noji, S. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.
Nollert, M. U. *See* Patel, Nollert, and McEver.
Nomoto, H. *See* Stinchcombe, Nomoto, Cutler, and Hopkins.
Nörenberg, U., Hubert, M., Brümmendorf, T., Tárnok, A., and Rathjen, F. G. Characterization of functional domains of the tenascin-R (restrictin) polypeptide: Cell attachment site, binding with F11, and enhancement of F11-mediated neurite outgrowth by tenascin-R. 130:473.
Nortamo, P. *See* Li, Xie, Kantor, Koistinen, Altieri, Nortamo, and Gahmberg.
Nothwehr, S. F., Conibear, E., and Stevens, T. H. Golgi and vacuolar membrane proteins reach the vacuole in *vps1* mutant yeast cells via the plasma membrane. 129:35.
Novak, K. D., Peterson, M. D., Reedy, M. C., and Titus, M. A. *Dictyostelium* myosin I double mutants exhibit conditional defects in pinocytosis. 131:1205.
Novick, P. *See* Govindan, Bowser, and Novick.
— *See* TerBush and Novick.
Nunbhakdi-Craig, V. *See* Sontag, Nunbhakdi-Craig, Bloom, and Mumby.
Nurse, P. *See* Verde, Mata, and Nurse.
Nuttley, W. M. *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.
Nykjaer, A. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.

O

Oatey, P. B. *See* Motley, Lumb, Oatey, Jennings, De Zoysa, Wanders, Tabak, and Danpure.
Ochiya, T., Sakamoto, H., Tsukamoto, M., Sugimura, T., and Terada, M. Hst-1 (FGF-4) antisense oligonucleotides block murine limb development. 130:997.
Oegema, K., Whitfield, W. G. F., and Alberts, B. The cell cycle–dependent localization of the CP190 centrosomal protein is determined by the coordinate action of two separable domains. 131:1261.
Ogawara, M., Inagaki, N., Tsujimura, K., Takai, Y., Sekimata, M., Ha, M. H., Imajoh-Ohmi, S., Hirai, S., Ohno, S., Sugiura, H., Yamauchi, T., Inagaki, M. Differential targeting of protein kinase C and CaM kinase II signalings to vimentin. 131:1055.
Öhman, K. *See* Carvalho, Seeler, Öhman, Jordan, Pettersson, Akusjärvi, Carmo-Fonseca, and Dejean.
Ohno, S. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Okada, H. *See* Strutz, Okada, Lo, Danoff, Carone, Tomaszewski, and Neilson.
Okada, Y. *See* Yamazaki, Nakata, Okada, and Hirokawa.
Okinaga, T. *See* Sase, Okinaga, Hoshi, Feigenson, and Kinosita.
Okumura, E. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.
Oliver, C. *See* Robbins, Ward, and Oliver.
Olmsted, J. B. *See* Olson, McIntosh, and Olmsted.
Olson, E. N. *See* Staudinger, Zhou, Burgess, Elledge, and Olson.
— *See* Venuti, Morris, Vivian, Olson, and Klein.
Olson, K. R., McIntosh, J. R., and Olmsted, J. B. Analysis of MAP 4 function in living cells using green fluorescent protein (GFP) chimeras. 130:639.
Omary, M. B. *See* Ku, Michie, Oshima, and Omary.
— *See* Liao, Lowthert, Ku, Fernandez, and Omary.
Omoto, C. K. *See* Kuriyama, Kofron, Essner, Kato, Dragas-Granoic, Omoto, and Khodjakov.
Ono, S. *See* Castellino, Ono, Matsumura, and Luini.
Oohashi, T. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.
Ooi, C. E. *See* Peters, Hsu, Ooi, Finazzi, Teal, Oorschot, Donaldson, and Klausner.
Ookata, K., Hisanaga, S., Bulinski, J. C., Murofushi, H., Aizawa, H., Itoh, T. J., Hotani, H., Okumura, E., Tachibana, K., and Kishimoto, T. Cyclin B interaction with microtubule-associated protein 4 (MAP4) targets $p34^{cdc2}$ kinase to microtubules and is a potential regulator of M-phase microtubule dynamics. 128:849.
Oorschot, V. *See* Peters, Hsu, Ooi, Finazzi, Teal, Oorschot, Donaldson, and Klausner.
Opstelten, D.-J. E., Raamsman, M. J. B., Wolfs, K., Horzinek, M. C., and Rottier, P. J. M. Envelope glycoprotein interactions in coronavirus assembly. 131:339.
Ora, A. *See* Rodríguez, Rioult, Ora, and Andrews.
Orberger, G. *See* Volz, Orberger, Porwoll, Hauri, and Tauber.
Orci, L. *See* Shaywitz, Orci, Ravazzola, Swaroop, and Kaiser.
— *See* Vozzi, Ullrich, Charollais, Philippe, Orci, and Meda.

Oritani, K. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Oshima, R. G. *See* Ku, Michie, Oshima, and Omary.
Otey, C. A. *See* Schaller, Otey, Hildebrand, and Parsons.
O'Toole, E. T. *See* Winey, Mamay, O'Toole, Mastronarde, Giddings, McDonald, and McIntosh.
O'Toole, T. *See* Shattil, O'Toole, Eigenthaler, Thon, Williams, Babior, and Ginsberg.
Otsuka, A. J., Franco, R., Yang, B., Shim, K.-H., Tang, L. Z., Zhang, Y. Y., Boontrakulpoontawee, P., Jeyaprakash, A., Hedgecock, E., Wheaton, V. I., and Sobery, A. An ankyrin-related gene (*unc-44*) is necessary for proper axonal guidance in *Caenorhabditis elegans*. 129:1081.
— *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.
Ott, H. *See* Bastmeyer, Ott, Leppert, and Stuermer.
Overath, P. *See* Steverding, Stierhof, Fuchs, Tauber, and Overath.
Owen, C. A., Campbell, M. A., Sannes, P. L., Boukedes, S. S., and Campbell, E. J. Cell surface–bound elastase and cathepsin G on human neutrophils: A novel, non-oxidative mechanism by which neutrophils focus and preserve catalytic activity of serine proteinases. 131:775.
Ozawa, E. *See* Suzuki, Yoshida, and Ozawa.

P

Pagano, R. E. *See* Hanada and Pagano.
Page, L. J., and Robinson, M. S. Targeting signals and subunit interactions in coated vesicle adaptor complexes. 131:619.
Palladino, F. *See* Cockell, Palladino, Laroche, Kyrion, Liu, Lustig, and Gasser.
Paltauf, F. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Pantaloni, D. *See* Marchand, Moreau, Paoletti, Cossart, Carlier, and Pantaloni.
Panzeri, M. C. *See* Raichman, Panzeri, Clementi, Papazafiri, Eckley, Clegg, Villa, and Meldolesi.
Paoletti, A. *See* Marchand, Moreau, Paoletti, Cossart, Carlier, and Pantaloni.
Papazafiri, P. *See* Raichman, Panzeri, Clementi, Papazafiri, Eckley, Clegg, Villa, and Meldolesi.
Paradies, N. *See* Murphy-Erdosh, Yoshida, Paradies, and Reichardt.
Pardi, R. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.
— *See* Pfau, Leitenberg, Rinder, Smith, Pardi, and Bender.
Pardue, M. L. *See* Ayme-Southgate, Southgate, Saide, Benian, and Pardue.
Parkhouse, R. M. E. *See* Zheng, Katoh, He, Oritani, Miyake, Lesley, Hyman, Hamik, Parkhouse, Farr, and Kincade.
Parkos, C. A. *See* Diamond, Alon, Parkos, Quinn, and Springer.
Parmelee, S. J. *See* Urata, Parmelee, Agard, and Sedat.
Parodi, A. J. *See* Labriola, Cazzulo, and Parodi.
Parpal, S., Gustavsson, J., and Strålfors, P. Isolation of phosphooligosaccharide/phosphoinositol glycan from caveolae and cytosol of insulin-stimulated cells. 131:125.
Parra, M. *See* Discher, Winardi, Schischmanoff, Parra, Conboy, and Mohandas.
Parsons, J. T. *See* Schaller, Otey, Hildebrand, and Parsons.
Parsons, S. F. *See* Waterman-Storer, Gregory, Parsons, and Salmon.
Parsons, S. J. *See* Chang, Gill, Settleman, and Parsons.
Parton, R. G. *See* Fiedler, Lafont, Parton, and Simons.
Parvinen, M. *See* Västrik, Kaipainen, Penttilä, Lymboussakis, Alitalo, Parvinen, and Alitalo.
Paschal, B. M., and Gerace, L. Identification of NTF2, a cytosolic factor for nuclear import that interacts with nuclear pore complex protein p62. 129:925.
Pasqualini, R., Koivunen, E., and Ruoslahti, E. A peptide isolated from phage display libraries is a structural and functional mimic of an RGD-binding site on integrins. 130:1189.
Pasternak, C., Wong, S., and Elson, E. L. Mechanical function of dystrophin in muscle cells. 128:355.
Patel, K. D., Nollert, M. U., and McEver, R. P. P-selectin must extend a sufficient length from the plasma membrane to mediate rolling of neutrophils. 131:1893.
— *See* Moore, Patel, Bruehl, Fugang, Johnson, Lichenstein, Cummings, Bainton, and McEver.
Patel-King, R. S. *See* King, Patel-King, Wilkerson, and Witman.
Paulsson, M. *See* Aeschlimann, Kaupp, and Paulsson.
Pavalko, F. M., Walker, D. M., Graham, L., Goheen, M., Doerschuk, C. M., and Kansas, G. S. The cytoplasmic domain of L-selectin interacts with cytoskeletal proteins via α-actinin: Receptor positioning in microvilli does not require interaction with α-actinin. 129:1155.
Payne, G. S. *See* Nicolson, Weisman, Payne, and Wickner.
Payrastre, B. *See* Guinebault, Payrastre, Racaud-Sultan, Mazarguil, Breton, Mauco, Plantavid, and Chap.
Pazour, G. J., Sineshchekov, O. A., and Witman, G. B. Mutational analysis of the phototransduction pathway of *Chlamydomonas reinhardtii*. 131:427.
— *See* Wilkerson, King, Koutoulis, Pazour, and Witman.
Peach, R. *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.
— *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.
Peck, R. K. *See* Huttenlauch, Geisler, Plessmann, Peck, Weber, and Stick.
Pederson, T. *See* Jacobson, Cao, Wang, and Pederson.
Pelcher, L. E. *See* McCollum, Balasubramanian, Pelcher, Hemmingsen, and Gould.
Pellman, D., Bagget, M., Tu, H.-Y., and Fink, G. R. Two microtubule-associated proteins required for anaphase spindle movement in *Saccharomyces cerevisiae*. 130:1373. Correction. 131:561.
Pennock, D. G. *See* Gaertig, Cruz, Bowen, Gu, Pennock, and Gorovsky.
Penttilä, T.-L. *See* Västrik, Kaipainen, Penttilä, Lymboussakis, Alitalo, Parvinen, and Alitalo.
Perez, G. M. *See* Meier, Perez, and Wallace.
Perou, C. M. *See* Ward, Perou, Lloyd, and Kaplan.
Perriard, J.-C. *See* von Arx, Bantle, Soldati, and Perriard.
Perrone, T. N. *See* Albers, Davis, Perrone, Lee, Liu, and Vore.
Persson, H. *See* Timmusk, Lendahl, Fanakoshi, Arenas, Persson, and Metsis.
Peter, M. *See* Valtz, Peter, and Herskowitz.
Peters, L. L., John, K. M., Lu, F. M., Eicher, E. M., Higgins, A., Yialamas, M., Turtzo, L. C., Otsuka, A. J., and Lux, S. E. *Ank3* (epithelial ankyrin), a widely distributed new member of the ankyrin gene family and the major ankyrin in kidney, is expressed in alternatively spliced forms, including forms that lack the repeat domain. 130:313.
Peters, P. J., Hsu, V. W., Ooi, C. E., Finazzi, D., Teal, S. B., Oorschot, V., Donaldson, J. G., and Klausner, R. D. Overexpression of wild-type and mutant ARF1 and ARF6: Distinct perturbations of nonoverlapping membrane compartments. 128:1003.
— *See* Marks, Roche, van Donselaar, Woodruff, Peters, and Bonifacino.
Petersen, C. M. *See* Conese, Nykjaer, Petersen, Cremona, Pardi, Andreasen, Gliemann, Christensen, and Blasi.
Peterson, M. D. *See* Novak, Peterson, Reedy, and Titus.
Petit, P. X., Lecoeur, H., Zorn, E., Dauguet, C., Mignotte, B., and Gougeon, M.-L. Alterations in mitochondrial structure and function are early events of dexamethasone-induced thymocyte apoptosis. 130:157.
Pettersson, U. *See* Carvalho, Seeler, Öhman, Jordan, Pettersson, Akusjärvi, Carmo-Fonseca, and Dejean.
Pfaff, M. *See* Fässler, Pfaff, Murphy, Noegel, Johansson, Timpl, and Albrecht.
Pfau, S., Leitenberg, D., Rinder, H., Smith, B. R., Pardi, R., and Bender, J. R. Lymphocyte adhesion-dependent calcium signaling in human endothelial cells. 128:969.
Philippe, J. *See* Vozzi, Ullrich, Charollais, Philippe, Orci, and Meda.
Philippe, M. *See* Jackson, Chevalier, Philippe, and Kirschner.
Phillips, G. R. *See* Burgoon, Hazan, Phillips, Crossin, Edelman, and Cunningham.
Piali, L., Hammel, P., Uherek, C., Bachmann, F., Gisler, R. H., Dunon, D., and Imhof, B. A. CD31/PECAM-1 is a ligand for $\alpha_v\beta_3$ integrin involved in adhesion of leukocytes to endothelium. 130:451.
Pierce, J. H. *See* LaRochelle, Dirsch, Finch, Cheon, May, Marchese, Pierce, and Aaronson.

Pilch, P. F. *See* Kandror, Stephens, and Pilch.
Pinon, D. *See* Roettger, Rentsch, Pinon, Holicky, Hadac, Larkin, and Miller.
Pintucci, G. *See* Bikfalvi, Klein, Pintucci, Quarto, Mignatti, and Rifkin.
Piper, R. C., Cooper, A. A., Yang, H., and Stevens, T. H. *VPS27* controls vacuolar and endocytic traffic through a prevacuolar compartment in *Saccharomyces cerevisiae*. 131:603.
—, Xu, X., Russell, D. G., Little, B. M., and Landfear, S. M. Differential targeting of two glucose transporters from *Leishmania enriettii* is mediated by an NH_2-terminal domain. 128:499.
Pittler, S. J., Fliesler, S. J., Fisher, P. L., Kennedy Keller, R., and Rapp, L. M. In vivo requirement of protein prenylation for maintenance of retinal cytoarchitecture and photoreceptor structure. 130:431.
Plank, C. *See* Prchla, Plank, Wagner, Blaas, and Fuchs.
Plantavid, M. *See* Guinebault, Payrastre, Racaud-Sultan, Mazarguil, Breton, Mauco, Plantavid, and Chap.
Plee, E. *See* Poliard, Nifuji, Lamblin, Plee, Forest, and Kellermann.
Plessmann, U. *See* Huttenlauch, Geisler, Plessmann, Peck, Weber, and Stick.
Ploegh, H. L. *See* Raposo, van Santen, Leijendekker, Geuze, and Ploegh.
Ploubidou, A. *See* Robinson, Sherwin, Ploubidou, Byard, and Gull.
Plowman, G. *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.
Plutner, H. *See* Brown, DeWald, Emr, Plutner, and Balch.
Podini, P. *See* Bastianutto, Clementi, Codazzi, Podini, De Giorgi, Rizzuto, Meldolesi, and Pozzan.
Pohl, T. *See* Grandi, Emig, Weise, Hucho, Pohl, and Hurt.
Poliard, A., Nifuji, A., Lamblin, D., Plee, E., Forest, C., and Kellermann, O. Controlled conversion of an immortalized mesodermal progenitor cell towards osteogenic, chondrogenic, or adipogenic pathways. 130:1461.
Pollard, T. D. *See* Kelleher, Atkinson, and Pollard.
Pollerberg, G. E. *See* Suter, Pollerberg, Buchstaller, Giger, Dreyer, and Sonderegger.
Pon, L. A. *See* Simon, Swayne, and Pon.
Popa, I. *See* Godyna, Liau, Popa, Stefansson, and Argraves.
Porwoll, S. *See* Volz, Orberger, Porwoll, Hauri, and Tauber.
Posse de Chaves, E., Vance, D. E., Campenot, R. B., and Vance, J. E. Axonal synthesis of phosphatidylcholine is required for normal axonal growth in rat sympathetic neurons. 128:913.
Poulat, F., Girard, F., Chevron, M.-P., Gozé, C., Rebillard, X., Calas, B., Lamb, N., and Berta, P. Nuclear localization of the testis determining gene product SRY. 128:737.
Powers, M. A., Macaulay, C., Masiarz, F. R., and Forbes, D. J. Reconstituted nuclei depleted of a vertebrate GLFG nuclear pore protein, p97, import but are defective in nuclear growth and replication. 128:721.
Pozzan, T. *See* Bastianutto, Clementi, Codazzi, Podini, De Giorgi, Rizzuto, Meldolesi, and Pozzan.
Prchla, E., Plank, C., Wagner, E., Blaas, D., and Fuchs, R. Virus-mediated release of endosomal content in vitro: Different behavior of adenovirus and rhinovirus serotype 2. 131:111.
Preisig, P. A. *See* Franch, Shay, Alpern, and Preisig.
Press, B. *See* Feng, Press, and Wandinger-Ness.
Prévost, M.-C. *See* Adam, Arpin, Prévost, Gounon, and Sansonetti.
Price, D. L. *See* Ehlers, Kaplan, Price, and Koliatsos.
Primakoff, P. *See* Wolfsberg, Primakoff, Myles, and White.
Pringle, J. R. *See* Chant, Mischke, Mitchell, Herskowitz, and Pringle.
— *See* Chant and Pringle.
Prochiantz, A. *See* Allinquant, Hantraye, Mailleux, Moya, Bouillot, and Prochiantz.
Protasi, F. *See* Sun, Protasi, Takahashi, Takeshima, Ferguson, and Franzini-Armstrong.
Provenzano, C. *See* Castellani, Reedy, Gauzzi, Provenzano, Alemà, and Falcone.
Prud'homme, J. *See* St-Arnaud, Prud'homme, Leung-Hagesteijn, and Dedhar.
Prusiner, S. B. *See* Taraboulos, Scott, Semenov, Avraham, Laszlo, and Prusiner.
Pryciak, P. M. *See* Dorer, Pryciak, and Hartwell.
Puri, K. D., Finger, E. B., Gaudernack, G., and Springer, T. A. Sialomucin CD34 is the major L-selectin ligand in human tonsil high endothelial venules. 131:261.

Q

Quarles, R. H. *See* Bö, Quarles, Fujita, Bartoszewicz, Sato, and Trapp.
Quarto, N. *See* Bikfalvi, Klein, Pintucci, Quarto, Mignatti, and Rifkin.
Quinn, M. T. *See* Diamond, Alon, Parkos, Quinn, and Springer.

R

Raab, G. *See* Higashiyama, Iwamoto, Goishi, Raab, Taniguchi, Klagsbrun, and Mekada.
Raamsman, M. J. B. *See* Opstelten, Raamsman, Wolfs, Horzinek, and Rottier.
Rabouille, C., Misteli, T., Watson, R., and Warren, G. Reassembly of Golgi stacks from mitotic Golgi fragments in a cell-free system. 129:605.
— *See* Nakamura, Rabouille, Watson, Nilsson, Hui, Slusarewicz, Kreis, and Warren.
Racaud-Sultan, C. *See* Guinebault, Payrastre, Racaud-Sultan, Mazarguil, Breton, Mauco, Plantavid, and Chap.
Rachubinski, R. A. *See* Szilard, Titorenko, Veenhuis, and Rachubinski.
Raichman, M., Panzeri, M. C., Clementi, E., Papazafiri, P., Eckley, M., Clegg, D. O., Villa, A., and Meldolesi, J. Differential localization and functional role of calsequestrin in growing and differentiated myoblasts. 128:341.
Raikhel, N. V. *See* Matsuoka, Bassham, Raikhel, and Nakamura.
Raines, E. W. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Rak, J., Mitsuhashi, Y., Erdos, V., Huang, S.-n., Filmus, J., and Kerbel, R. S. Massive programmed cell death in intestinal epithelial cells induced by three-dimensional growth conditions: Suppression by mutant c-H-*ras* oncogene expression. 131:1587.
Ramirez, F. *See* Zhang, Hu, and Ramirez.
Rapiejko, P. J. *See* Silberstein, Collins, Kelleher, Rapiejko, and Gilmore.
Raposo, G., van Santen, H. M., Leijendekker, R., Geuze, H. J., and Ploegh, H. L. Misfolded major histocompatibility complex class I molecules accumulate in an expanded ER-Golgi intermediate compartment. 131:1403.
Rapp, L. M. *See* Pittler, Fliesler, Fisher, Kennedy Keller, and Rapp.
Rapp, U. R. *See* Wang, Millan, Cox, Der, Rapp, Beck, Zha, and Reed.
Ratan, R. R. *See* Lin, Lee, Narayanan, Baraban, Hardwick, and Ratan.
Rathjen, F. G. *See* Nörenberg, Hubert, Brümmendorf, Tárnok, and Rathjen.
Rattner, J. B. *See* Liao, Winkfein, Mack, Rattner, and Yen.
Ravazzola, M. *See* Shaywitz, Orci, Ravazzola, Swaroop, and Kaiser.
Rebillard, X. *See* Poulat, Girard, Chevron, Gozé, Rebillard, Calas, Lamb, and Berta.
Reed, J. C. *See* Wang, Millan, Cox, Der, Rapp, Beck, Zha, and Reed.
Reed, S. I. *See* Lew and Reed.
Reedy, M. *See* Burns, Reedy, Heuser, and De Lozanne.
Reedy, M. C. *See* Castellani, Reedy, Gauzzi, Provenzano, Alemà, and Falcone.
— *See* Novak, Peterson, Reedy, and Titus.
Regazzi, R. *See* Sadoul, Lang, Montecucco, Weller, Regazzi, Catsicas, Wollheim, and Halban.
Reichardt, L. F. *See* Gettner, Kenyon, and Reichardt.
— *See* Murphy-Erdosh, Yoshida, Paradics, and Reichardt.
Reinbothe, C. *See* Reinbothe, Reinbothe, Runge, and Apel.
Reinbothe, S., Reinbothe, C., Runge, S., and Apel, K. Enzymatic product formation impairs both the chloroplast receptor–binding function as well as translocation competence of the NADPH: Protochlorophyllide oxidoreductase, a nuclear-encoded plastid precursor protein. 129:299.
Reinhard, J. *See* Stöffler, Ruppert, Reinhard, and Bähler.
Rentsch, R. U. *See* Roettger, Rentsch, Hadac, Hellen, Burghardt, and Miller.
— *See* Roettger, Rentsch, Pinon, Holicky, Hadac, Larkin, and Miller.
Reuss-Borst, M. *See* Armeanu, Bühring, Reuss-Borst, Müller, and Klein.
Reymond, F. *See* Wahlberg, Geffen, Reymond, Simmen, and Spiess.
Richardson, C. *See* Jedd, Richardson, Litt, and Segev.
Richardson, C. J. *See* Jones, Litt, Richardson, and Segev.
Richardson, G. P. *See* Killick, Legan, Malenczak, and Richardson.
Richter, H.-P. *See* Schmalzing, Richter, Hansen, Schwarz, Just, and Aktories.

Ridsdale, J. A. *See* Cox, Ridsdale, Condeelis, and Hartwig.
Rieder, C. L., Cole, R. W., Khodjakov, A., and Sluder, G. The checkpoint delaying anaphase in response to chromosome monoorientation is mediated by an inhibitory signal produced by unattached kinetochores. 130:941.
— *See* Sluder, Thompson, Rieder, and Miller.
Riedy, M. F. *See* Williams, Riedy, Williams, Gatti, and Goldberg.
Riezman, H. *See* Hamburger, Egerton, and Riezman.
— *See* Schröder, Schimmöller, Singer-Krüger, and Riezman.
Rifkin, D. B. *See* Bikfalvi, Klein, Pintucci, Quarto, Mignatti, and Rifkin.
— *See* Einheber, Hannocks, Metz, Rifkin, and Salzer.
Rimm, D. L. *See* Brady-Kalnay, Rimm, and Tonks.
Rinder, H. *See* Pfau, Leitenberg, Rinder, Smith, Pardi, and Bender.
Rioult, M. G. *See* Rodríguez, Rioult, Ora, and Andrews.
Risling, M. *See* Frisén, Johansson, Török, Risling, and Lendahl.
Risse, B. *See* Schlenstedt, Harris, Risse, Lill, and Silver.
Rizzuto, R. *See* Bastianutto, Clementi, Codazzi, Podini, De Giorgi, Rizzuto, Meldolesi, and Pozzan.
Roach, H. I., Erenpreisa, J., and Aigner, T. Osteogenic differentiation of hypertrophic chondrocytes involves asymmetric cell divisions and apoptosis. 131:483.
Robbins, A. R., Ward, R. D., and Oliver, C. A mutation in glyceraldehyde 3-phosphate dehydrogenase alters endocytosis in CHO cells. 130:1093.
Roberds, S. L. *See* Durbeej, Larsson, Ibraghimov-Beskrovnaya, Roberds, Campbell, and Ekblom.
Robinson, D. R., Sherwin, T., Ploubidou, A., Byard, E. H., and Gull, K. Microtubule polarity and dynamics in the control of organelle positioning, segregation, and cytokinesis in the trypanosome cell cycle. 128:1163.
Robinson, M. S. *See* Page and Robinson.
Roche, P. A. *See* Marks, Roche, van Donselaar, Woodruff, Peters, and Bonifacino.
Röckel, D. *See* Langholz, Röckel, Mauch, Kozlowska, Bank, Krieg, and Eckes.
Rodier, J.-M., Vallés, A. M., Denoyelle, M., Thiery, J. P., and Boyer, B. pp60$^{c\text{-}src}$ is a positive regulator of growth factor-induced cell scattering in a rat bladder carcinoma cell line. 131:761.
Rodríguez, A., Rioult, M. G., Ora, A., and Andrews, N. W. A trypanosome-soluble factor induces IP_3 formation, intracellular Ca^{2+} mobilization and microfilament rearrangement in host cells. 129:1263.
Rodriguez-Boulan, E. *See* Marrs, Andersson-Fisone, Jeong, Cohen-Gould, Zurzolo, Nabi, Rodriguez-Boulan, and Nelson.
Rodriguez Erena, N. F. *See* Driessens, Stroeken, Rodriguez Erena, van der Valk, van Rijthoven, and Roos.
Roeder, G. S. *See* Sym and Roeder.
Roettger, B. F., Rentsch, R. U., Hadac, E. M., Hellen, E. H., Burghardt, T. P., and Miller, L. J. Insulation of a G protein–coupled receptor on the plasmalemmal surface of the pancreatic acinar cell. 130:579.
—, Rentsch, R. U., Pinon, D., Holicky, E., Hadac, E., Larkin, J. M., and Miller, L. J. Dual pathways of internalization of the cholecystokinin receptor. 128:1029.
Roh, J.-Y., and Stanley, J. R. Intracellular domain of desmoglein 3 (Pemphigus Vulgaris Antigen) confers adhesive function on the extracellular domain of E-cadherin without binding catenins. 128:939.
Rohrer, J., Schweizer, A., Johnson, K. F., and Kornfeld, S. A determinant in the cytoplasmic tail of the cation-dependent mannose 6-phosphate receptor prevents trafficking to lysosomes. 130:1297.
Roos, E. *See* Driessens, Stroeken, Rodriguez Erena, van der Valk, van Rijthoven, and Roos.
Rose, M. D. *See* Gammie, Kurihara, Vallee, and Rose.
— *See* Simons, Ferro-Novick, Rose, and Helenius.
Rosen, V. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.
Rosenbaum, J. L. *See* Kozminski, Beech, and Rosenbaum.
Rosenthal, N. *See* Xiao, Grieshammer, and Rosenthal.
Rosette, C., and Karin, M. Cytoskeletal control of gene expression: Depolymerization of microtubules activates NF-κB. 128:1111.
Roskelley, C. *See* Streuli, Schmidhauser, Bailey, Yurchenco, Skubitz, Roskelley, and Bissell.
Ross, R. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Rossert, J., Eberspaecher, H., and de Crombrugghe, B. Separate *cis*-acting DNA elements of the mouse pro-α1(I) collagen promoter direct expression of reporter genes to different type I collagen-producing cells in transgenic mice. 129:1421.
Roth, D. *See* Chamberlain, Roth, Morgan, and Burgoyne.
Roth, M. B. *See* Neugebauer, Stolk, and Roth.
Roth, M. G. *See* Naim, Dodds, Brewer, and Roth.
Roth, S. *See* Dawson, Roth, and Artavanis-Tsakonas.
Rothman, J. E. *See* Miesenböck and Rothman.
Rottier, P. J. M. *See* Opstelten, Raamsman, Wolfs, Horzinek, and Rottier.
Rout, M. P. *See* Aitchison, Blobel, and Rout.
— *See* Aitchison, Rout, Marelli, Blobel, and Wozniak.
— *See* Strambio-de-Castillia, Blobel, and Rout.
Rowe, T. *See* Aridor, Bannykh, Rowe, and Balch.
Roy, R. *See* Vilquin, Wagner, Kinoshita, Roy, and Tremblay.
Rubin, L. L. *See* Staddon, Smales, Schulze, Esch, and Rubin.
Ruegg, M. A. *See* Denzer, Gesemann, Schumacher, and Ruegg.
— *See* Gesemann, Denzer, and Ruegg.
Rughetti, A. *See* Lu, Lu, Rughetti, and Taylor-Papadimitriou.
Ruhlen, R. L. *See* Caplow, Ruhlen, and Shanks.
Runge, S. *See* Reinbothe, Reinbothe, Runge, and Apel.
Ruoslahti, E. *See* Pasqualini, Koivunen, and Ruoslahti.
Ruppert, C. *See* Stöffler, Ruppert, Reinhard, and Bähler.
Ruppert, M., Aigner, S., Hubbe, M., Yagita, H., and Altevogt, P. The L1 adhesion molecule is a cellular ligand for VLA-5. 131:1881.
Rush, J. S., and Waechter, C. J. Transmembrane movement of a water-soluble analogue of mannosylphosphoryldolichol is mediated by an endoplasmic reticulum protein. 130:529.
Russell, D. G. *See* Piper, Xu, Russell, Little, and Landfear.
Ruston, S. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.
Rydén, M. *See* Trupp, Rydén, Jörnvall, Funakoshi, Timmusk, Arenas, and Ibáñez.

S

Sachs, M. *See* Brinkmann, Foroutan, Sachs, Weidner, and Birchmeier.
— *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Sachs, R. K. *See* Yokota, van den Engh, Hearst, Sachs, and Trask.
Sado, Y. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.
Sadoul, K., Lang, J., Montecucco, C., Weller, U., Regazzi, R., Catsicas, S., Wollheim, C. B., and Halban, P. A. SNAP-25 is expressed in islets of Langerhans and is involved in insulin release. 128:1019.
Sadoul, R. *See* Martinou, Fernandez, Missotten, White, Allet, Sadoul, and Martinou.
Saelinger, C. B. *See* FitzGerald, Fryling, Zdanovsky, Saelinger, Kounnas, Winkles, Strickland, and Leppla.
Sahuquet, A. *See* Martin, Andréoli, Sahuquet, Montcourrier, Algrain, and Mangeat.
Saide, J. *See* Ayme-Southgate, Southgate, Saide, Benian, and Pardue.
Sakai, H. *See* Wang, Sakai, and Wiedmann.
Sakai, J. *See* Way, Sanders, Garcia, Sakai, and Matsudaira.
Sakamoto, H. *See* Ochiya, Sakamoto, Tsukamoto, Sugimura, and Terada.
Sakmann, B. *See* Kues, Brenner, Sakmann, and Witzemann.
Sako, Y., and Kusumi, A. Barriers for lateral diffusion of transferrin receptor in the plasma membrane as characterized by receptor dragging by laser tweezers: Fence versus tether. 129:1559.
Saksela, O. *See* Zheng, Saksela, Matikainen, and Vaheri.
Salmon, E. D. *See* Waterman-Storer, Gregory, Parsons, and Salmon.
— *See* Yeh, Skibbens, Cheng, Salmon, and Bloom.
Saltiel, A. R. *See* Mastick, Brady, and Saltiel.
Salzer, J. L. *See* Einheber, Hannocks, Metz, Rifkin, and Salzer.
Sampath, T. K. *See* Yamashita, ten Dijke, Huylebroeck, Sampath, Andries, Smith, Heldin, and Miyazono.
Samuels, A. L., Giddings, T. H., Jr., and Staehelin, L. A. Cytokinesis in tobacco BY-2 and root tip cells: A new model of cell plate formation in higher plants. 130:1345.
Sánchez-Madrid, F. *See* del Pozo, Sánchez-Mateos, Nieto, and Sánchez-Madrid.

Sánchez-Mateos, P. *See* del Pozo, Sánchez-Mateos, Nieto, and Sánchez-Madrid.
Sanders, M. *See* Way, Sanders, Garcia, Sakai, and Matsudaira.
Sandrock, A. W., Jr. *See* Goodearl, Yee, Sandrock, Corfas, and Fischbach.
Sannes, P. L. *See* Owen, Campbell, Sannes, Boukedes, and Campbell.
Sansonetti, P. J. *See* Adam, Arpin, Prévost, Gounon, and Sansonetti.
Saredi, A. *See* Gaglio, Saredi, and Compton.
Sase, I., Okinaga, T., Hoshi, M., Feigenson, G. W., and Kinosita, K., Jr. Regulatory mechanisms of the acrosome reaction revealed by multiview microscopy of single starfish sperm. 131:963.
Sato, S. *See* Bö, Quarles, Fujita, Bartoszewicz, Sato, and Trapp.
Sato-Yoshitake, R. *See* Noda, Sato-Yoshitake, Kondo, Nangaku, and Hirokawa.
Saunders, J. *See* Fawcett, Buckley, Holness, Bird, Spragg, Saunders, Harris, and Simmons.
Saunders, W. S., Koshland, D., Eshel, D., Gibbons, I. R., and Hoyt, M. A. *Saccharomyces cerevisiae* kinesin- and dynein-related proteins required for anaphase chromosome segregation. 128:617.
Savitz, A. J. *See* Wanker, Sun, Savitz, and Meyer.
Sawitzky, H., and Grolig, F. Phragmoplast of the green alga *Spirogyra* is functionally distinct from the higher plant phragmoplast. 130:1359.
Sawyer, A. *See* Andersen, Buendia, Domínguez, Sawyer, and Karsenti.
Scarpa, S. *See* Screpanti, Scarpa, Meco, Bellavia, Stuppia, Frati, Modesti, and Gulino.
Schafer, D. A., Hug, C., and Cooper, J. A. Inhibition of CapZ during myofibrillogenesis alters assembly of actin filaments. 128:61.
Schäfer, S. *See* Demlehner, Schäfer, Grund, and Franke.
Schaller, M. D., Otey, C. A., Hildebrand, J. D., and Parsons, J. T. Focal adhesion kinase and paxillin bind to peptides mimicking β integrin cytoplasmic domains. 130:1181.
Schalling, M. *See* Taneja, McCurrach, Schalling, Housman, and Singer.
Scharnhorst, V. *See* Kranenburg, Scharnhorst, Van der Eb, and Zantema.
Schatz, G. *See* Gratzer, Lithgow, Bauer, Lamping, Paltauf, Kohlwein, Haucke, Junne, Schatz, and Horst.
Scheer, U. *See* Weisenberger and Scheer.
Schekman, R. *See* Lyman and Schekman.
Schibler, U. *See* Schmidt and Schibler.
Schiebel, E. *See* Spang, Courtney, Grein, Matzner, and Schiebel.
Schimmöller, F. *See* Schröder, Schimmöller, Singer-Krüger, and Riezman.
Schindler, R. *See* Itin, Schindler, and Hauri.
Schischmanoff, P. O. *See* Discher, Winardi, Schischmanoff, Parra, Conboy, and Mohandas.
Schlenstedt, G., Harris, S., Risse, B., Lill, R., and Silver, P. A. A yeast DnaJ homologue, Scj1p, can function in the endoplasmic reticulum with BiP/Kar2p via a conserved domain that specifies interactions with Hsp70s. 129:979.
— *See* Corbett, Koepp, Schlenstedt, Lee, Hopper, and Silver.
Schmalzing, G., Richter, H.-P., Hansen, A., Schwarz, W., Just, I., and Aktories, K. Involvement of the GTP binding protein Rho in constitutive endocytosis in *Xenopus laevis* oocytes. 130:1319.
Schmid, S. L. *See* Damke, Baba, van der Bliek, and Schmid.
— *See* Lamaze and Schmid.
Schmidhauser, C. *See* Streuli, Schmidhauser, Bailey, Yurchenco, Skubitz, Roskelley, and Bissell.
Schmidt, E. E., and Schibler, U. Cell size regulation, a mechanism that controls cellular RNA accumulation: Consequences on regulation of the ubiquitous transcription factors Oct1 and NF-Y, and the liver-enriched transcription factor DBP. 128:467.
Schmitt, R. *See* Török, Strand, Schmitt, Tick, Török, Kiss, and Mechler.
Schneider, K. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Scholey, J. *See* Afshar, Scholey, and Hawley.
Schröder, S., Schimmöller, F., Singer-Krüger, B., and Riezman, H. The Golgi-localization of yeast Emp47p depends on its di-lysine motif but is not affected by the *ret1-1* mutation in α-COP. 131:895.
Schubiger, G. *See* von Dassow and Schubiger.
Schulze, C. *See* Staddon, Smales, Schulze, Esch, and Rubin.
Schumacher, B. *See* Denzer, Gesemann, Schumacher, and Ruegg.
Schumacher, J. M., Lee, K., Edelhoff, S., and Braun, R. E. Spnr, a murine RNA-binding protein that is localized to cytoplasmic microtubules. 129:1023.
Schwarz, W. *See* Schmalzing, Richter, Hansen, Schwarz, Just, and Aktories.
Schweizer, A. *See* Rohrer, Schweizer, Johnson, and Kornfeld.
Scott, M. *See* Taraboulos, Scott, Semenov, Avraham, Laszlo, and Prusiner.
Scott, S. V., and Klionsky, D. J. In vitro reconstitution of cytoplasm to vacuole protein targeting in yeast. 131:1727.
— *See* Harding, Morano, Scott, and Klionsky.
Screpanti, I., Scarpa, S., Meco, D., Bellavia, D., Stuppia, L., Frati, L., Modesti, A., and Gulino, A. Epidermal growth factor promotes a neural phenotype in thymic epithelial cells and enhances neuropoietic cytokine expression. 130:183.
Scrobogna, M. *See* Giannini, Conti, Mammarella, Scrobogna, and Sorrentino.
Sdicu, A.-M. *See* Lussier, Sdicu, Ketela, and Bussey.
Sedat, J. W. *See* Moritz, Braunfeld, Fung, Sedat, Alberts, and Agard.
— *See* Urata, Parmelee, Agard, and Sedat.
Seeler, J.-S. *See* Carvalho, Seeler, Öhman, Jordan, Pettersson, Akusjärvi, Carmo-Fonseca, and Dejean.
Segall, J. E., Kuspa, A., Shaulsky, G., Ecke, M., Maeda, M., Gaskins, C., Firtel, R. A., and Loomis, W. F. A MAP kinase necessary for receptor-mediated activation of adenylyl cyclase in *Dictyostelium*. 128:405.
Segev, N. *See* Jedd, Richardson, Litt, and Segev.
— *See* Jones, Litt, Richardson, and Segev.
Sekimata, M. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Selkoe, D. J. *See* Haass, Koo, Capell, Teplow, and Selkoe.
— *See* Yamazaki, Selkoe, and Koo.
Semenov, A. *See* Taraboulos, Scott, Semenov, Avraham, Laszlo, and Prusiner.
Serr, M. *See* McGrail, Gepner, Silvanovich, Ludmann, Serr, and Hays.
Settleman, J. *See* Chang, Gill, Settleman, and Parsons.
Seyer, J. M. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.
Shah, A. K. *See* Shartava, Monteiro, Bencsath, Schneider, Chait, Gussio, Casoria-Scott, Shah, Heuerman, and Goodman.
Shanks, J. *See* Caplow, Ruhlen, and Shanks.
Sharp, D. J., Yu, W., and Baas, P. W. Transport of dendritic microtubules establishes their nonuniform polarity orientation. 130:93.
Shartava, A., Monteiro, C. A., Bencsath, F. A., Schneider, K., Chait, B. T., Gussio, R., Casoria-Scott, L. A., Shah, A. K., Heuerman, C. A., and Goodman, S. R. A posttranslational modification of β-actin contributes to the slow dissociation of the spectrin-protein 4.1-actin complex of irreversibly sickled cells. 128:805.
Shattil, S. J., O'Toole, T., Eigenthaler, M., Thon, V., Williams, M., Babior, B. M., and Ginsberg, M. H. β_3-Endonexin, a novel polypeptide that interacts specifically with the cytoplasmic tail of the integrin β_3 subunit. 131:807.
Shaulsky, G. *See* Segall, Kuspa, Shaulsky, Ecke, Maeda, Gaskins, Firtel, and Loomis.
Shaw, A., Fortes, P. A. G., Stout, C. D., and Vacquier, V. D. Crystal structure and subunit dynamics of the abalone sperm lysin dimer: egg envelopes dissociate dimers, the monomer is the active species. 130:1117.
Shay, J. W. *See* Franch, Shay, Alpern, and Preisig.
Shaywitz, D. A., Orci, L., Ravazzola, M., Swaroop, A., and Kaiser, C. A. Human SEC13Rp functions in yeast and is located on transport vesicles budding from the endoplasmic reticulum. 128:769.
Sheetz, M. P. *See* Garcia-Blanco, Miller, and Sheetz.
Shelness, G. S. *See* Nicchitta, Murphy, Haynes, and Shelness.
Sherman, D. L. *See* Fannon, Sherman, Ilyina-Gragerova, Brophy, Friedrich, and Colman.
Sherwin, T. *See* Robinson, Sherwin, Ploubidou, Byard, and Gull.
Shibamoto, S., Hayakawa, M., Takeuchi, K., Hori, T., Miyazawa, K., Kitamura, N., Johnson, K. R., Wheelock, M. J., Matsuyoshi, N., Takeichi, M., and Ito, F. Association of p120, a tyrosine kinase substrate, with E-cadherin/catenin complexes. 128:949.
Shibasaki, F., and McKeon, F. Calcineurin functions in Ca^{2+}-activated cell death in mammalian cells. 131:735.
Shields, J. *See* Jackson, Bell, Dickinson, Timans, Shields, and Whittle.
Shigekawa, M. *See* Nakamura, Yamamoto, Nishitani, Matozaki, Suzuki, Wakabayashi, Shigekawa, and Goshima.
Shim, K.-H. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Shimizu, Y., Mobley, J. L., Finkelstein, L. D., and Chan, A. S. H. A role for phosphatidylinositol 3-kinase in the regulation of β1 integrin activity by the CD2 antigen. 131:1867.
Shin, K. S. *See* Kang, Shin, Song, Ha, Chung, and Kang.

Shu, H.-B., and Joshi, H. C. γ-Tubulin can both nucleate microtubule assembly and self-assemble into novel tubular structures in mammalian cells. 130:1137.
Shuster, C. B., and Herman, I. M. Indirect association of ezrin with F-actin: Isoform specificity and calcium sensitivity. 128:837.
Shutt, D. C., Wessels, D., Wagenknecht, K., Chandrasekhar, A., Hitt, A. L., Luna, E. J., and Soll, D. R. Ponticulin plays a role in the positional stabilization of pseudopods. 131:1495.
Sidhu, J. S. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Siemers, K. A. *See* Mays, Siemers, Fritz, Lowe, van Meer, and Nelson.
Silberstein, S., Collins, P. G., Kelleher, D. J., and Gilmore, R. The essential *OST2* gene encodes the 16-kD subunit of the yeast oligosaccharyltransferase, a highly conserved protein expressed in diverse eukaryotic organisms. 131:371.
—, Collins, P. G., Kelleher, D. J., Rapiejko, P. J., and Gilmore, R. The α subunit of the *Saccharomyces cerevisiae* oligosaccharyltransferase complex is essential for vegetative growth of yeast and is homologous to mammalian ribophorin I. 128:525.
Silvanovich, A. *See* McGrail, Gepner, Silvanovich, Ludmann, Serr, and Hays.
Silver, P. A. *See* Corbett, Koepp, Schlenstedt, Lee, Hopper, and Silver.
— *See* Schlenstedt, Harris, Risse, Lill, and Silver.
Silvers, A. J. *See* Briggs, Silvers, Johansen, and Johansen.
Silvio Gutkind, J. *See* Miyamoto, Teramoto, Coso, Silvio Gutkind, Burbelo, Akiyama, and Yamada.
Simard, D. *See* Benlimame, Simard, and Nabi.
Simmen, T. *See* Wahlberg, Geffen, Reymond, Simmen, and Spiess.
Simmons, D. L. *See* Fawcett, Buckley, Holness, Bird, Spragg, Saunders, Harris, and Simmons.
Simon, J. C. *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.
Simon, V. R., Swayne, T. C., and Pon, L. A. Actin-dependent mitochondrial motility in mitotic yeast and cell-free systems: Identification of a motor activity on the mitochondrial surface. 130:345.
Simons, J. F., Ferro-Novick, S., Rose, M. D., and Helenius, A. BiP/Kar2p serves as a molecular chaperone during carboxypeptidase Y folding in yeast. 130:41.
Simons, K. *See* Eaton, Auvinen, Luo, Jan, and Simons.
— *See* Fiedler, Lafont, Parton, and Simons.
Sineshchekov, O. A. *See* Pazour, Sineshchekov, and Witman.
Singer, R. H. *See* Taneja, McCurrach, Schalling, Housman, and Singer.
Singer-Krüger, B. *See* Schröder, Schimmöller, Singer-Krüger, and Riezman.
Sinke, R. J. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
Siomi, H., and Dreyfuss, G. A nuclear localization domain in the hnRNP A1 protein. 129:551.
Skarlatos, S. I. *See* Kruth, Skarlatos, Lilly, Chang, and Ifrim.
Skerjanc, I. S. *See* Slack, Skerjanc, Lach, Craig, Jardine, and McBurney.
Skerry, T. M. *See* Dallas, Miyazono, Skerry, Mundy, and Bonewald.
Skibbens, R. V. *See* Yeh, Skibbens, Cheng, Salmon, and Bloom.
Skoglund, U. *See* Mehlin, Daneholt, and Skoglund.
Skubitz, A. P. N. *See* Streuli, Schmidhauser, Bailey, Yurchenco, Skubitz, Roskelley, and Bissell.
Slack, R. S., Skerjanc, I. S., Lach, B., Craig, J., Jardine, K., and McBurney, M. W. Cells differentiating into neuroectoderm undergo apoptosis in the absence of functional retinoblastoma family proteins. 129:779.
Sluder, G., Thompson, E. A., Rieder, C. L., and Miller, F. J. Nuclear envelope breakdown is under nuclear not cytoplasmic control in sea urchin zygotes. 129:1447.
— *See* Rieder, Cole, Khodjakov, and Sluder.
Slusarewicz, P. *See* Nakamura, Rabouille, Watson, Nilsson, Hui, Slusarewicz, Kreis, and Warren.
Smales, C. *See* Staddon, Smales, Schulze, Esch, and Rubin.
Small, J. V., Herzog, M., and Anderson, K. Actin filament organization in the fish keratocyte lamellipodium. 129:1275.
Smart, E. J., Ying, Y., and Anderson, R. G. W. Hormonal regulation of caveolae internalization. 131:929.
— *See* Conrad, Smart, Ying, Anderson, and Bloom.
Smith, B. R. *See* Pfau, Leitenberg, Rinder, Smith, Pardi, and Bender.
Smith, J. C. *See* Yamashita, ten Dijke, Huylebroeck, Sampath, Andries, Smith, Heldin, and Miyazono.
Smith, T. R. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Snow, G. B. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
Snyder, M. *See* Heath, Copeland, Amberg, Del Priore, Snyder, and Cole.
— *See* Sobel and Snyder.
Snyder, S. H. *See* Walensky and Snyder.
So, C. L. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.
Sobel, S. G., and Snyder, M. A highly divergent γ-tubulin gene is essential for cell growth and proper microtubule organization in *Saccharomyces cerevisiae*. 131:1775.
Sobery, A. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Soldati, T. *See* von Arx, Bantle, Soldati, and Perriard.
Soler, A. P. *See* Knudsen, Soler, Johnson, and Wheelock.
Soll, D. R. *See* Shutt, Wessels, Wagenknecht, Chandrasekhar, Hitt, Luna, and Soll.
Solomon, F. *See* Henry, Gonzalez Agosti, and Solomon.
Sonderegger, P. *See* Suter, Pollerberg, Buchstaller, Giger, Dreyer, and Sonderegger.
Song, W. K. *See* Kang, Shin, Song, Ha, Chung, and Kang.
Song, Y.-H., and Mandelkow, E. The anatomy of flagellar microtubules: Polarity, seam, junctions, and lattice. 128:81.
Sonnenberg, A. *See* Wesseling, van der Valk, Vos, Sonnenberg, and Hilkens.
Sontag, E., Nunbhakdi-Craig, V., Bloom, G. S., and Mumby, M. C. A novel pool of protein phosphatase 2A is associated with microtubules and is regulated during the cell cycle. 128:1131.
Sorokin, L. *See* Kadoya, Kadoya, Durbeej, Holmvall, Sorokin, and Ekblom.
Sorrentino, V. *See* Giannini, Conti, Mammarella, Scrobogna, and Sorrentino.
Soullam, B., and Worman, H. J. Signals and structural features involved in integral membrane protein targeting to the inner nuclear membrane. 130:15.
Southgate, R. *See* Ayme-Southgate, Southgate, Saide, Benian, and Pardue.
Spang, A., Courtney, I., Grein, K., Matzner, M., and Schiebel, E. The Cdc31p-binding protein Karlp is a component of the half bridge of the yeast spindle pole body. 128:863.
Spector, A. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Spera, G. *See* Gnessi, Emidi, Jannini, Carosa, Maroder, Arizzi, Ulisse, and Spera.
Spiess, M. *See* Wahlberg, Geffen, Reymond, Simmen, and Spiess.
Spinardi, L., Einheber, S., Cullen, T., Milner, T. A., and Giancotti, F. G. A recombinant tail-less integrin β_4 subunit disrupts hemidesmosomes, but does not suppress $\alpha_6\beta_4$-mediated cell adhesion to laminins. 129:473.
Spitzer, E. *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Spragg, J. H. *See* Fawcett, Buckley, Holness, Bird, Spragg, Saunders, Harris, and Simmons.
Spring, F. *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.
Springer, T. A. *See* Alon, Kassner, Carr, Finger, Hemler, and Springer.
— *See* Diamond, Alon, Parkos, Quinn, and Springer.
— *See* Puri, Finger, Gaudernack, and Springer.
Spruce, B. A. *See* Böttger and Spruce.
Stack, J. H., DeWald, D. B., Takegawa, K., and Emr, S. D. Vesicle-mediated protein transport: Regulatory interactions between the Vps15 protein kinase and the Vps34 PtdIns 3-kinase essential for protein sorting to the vacuole in yeast. 129:321.
Staddon, J. M., Smales, C., Schulze, C., Esch, F. S., and Rubin, L. L. p120, a p120-related protein (p100), and the cadherin/catenin complex. 130:369.
Staehelin, L. A. *See* Samuels, Giddings, and Staehelin.
Stahl, A., and Mueller, B. M. The urokinase-type plasminogen activator receptor, a GPI-linked protein, is localized in caveolae. 129:335.
Stamenkovic, I. *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.
— *See* Bennett, Modrell, Greenfield, Bartolazzi, Stamenkovic, Peach, Jackson, Spring, and Aruffo.

Stanley, J. R. *See* Roh and Stanley.
St-Arnaud, R., Prud'homme, J., Leung-Hagesteijn, C., and Dedhar, S. Constitutive expression of calreticulin in osteoblasts inhibits mineralization. 131:1351.
Staudinger, J., Zhou, J., Burgess, R., Elledge, S. J., and Olson, E. N. PICK1: A perinuclear binding protein and substrate for protein kinase C isolated by the yeast two-hybrid system. 128:263.
Stefansson, S. *See* Godyna, Liau, Popa, Stefansson, and Argraves.
Steinberg, T. H. *See* Koval, Geist, Westphale, Kemendy, Civitelli, Beyer, and Steinberg.
Steinhardt, R. A. *See* Bi, Alderton, and Steinhardt.
Stempak, J. G. *See* Doyle, Stempak, Cowin, Colman, and D'Urso.
Stenius, K., Janz, R., Südhof, T. C., and Jahn, R. Structure of synaptogyrin (p29) defines novel synaptic vesicle protein. 131:1801.
Stephens, J. M. *See* Kandror, Stephens, and Pilch.
Steplewski, A. *See* Haas, Thatikunta, Steplewski, Johnson, Khalili, and Amini.
Stevens, T. H. *See* Nothwehr, Conibear, and Stevens.
— *See* Piper, Cooper, Yang, and Stevens.
Steverding, D., Stierhof, Y.-D., Fuchs, H., Tauber, R., and Overath, P. Transferrin-binding protein complex is the receptor for transferrin uptake in *Trypanosoma brucei*. 131:1173.
Stewart, M. *See* Buss and Stewart.
Stick, R. *See* Firmbach-Kraft and Stick.
— *See* Huttenlauch, Geisler, Plessmann, Peck, Weber, and Stick.
Stierhof, Y.-D. *See* Steverding, Stierhof, Fuchs, Tauber, and Overath.
Stinchcombe, J. C., Nomoto, H., Cutler, D. F., and Hopkins, C. R. Anterograde and retrograde traffic between the rough endoplasmic reticulum and the Golgi complex. 131:1387.
Stöffler, H.-E., Ruppert, C., Reinhard, J., and Bähler, M. A novel mammalian myosin I from rat with an SH3 domain localizes to Con A–inducible, F-actin–rich structures at cell–cell contacts. 129:819.
Stolk, J. A. *See* Neugebauer, Stolk, and Roth.
Stoorvogel, W. *See* van Weert, Dunn, Geuze, Maxfield, and Stoorvogel.
Storm, D. R. *See* Mark, Liu, Wong, Hinds, and Storm.
Stout, C. D. *See* Shaw, Fortes, Stout, and Vacquier.
Strålfors, P. *See* Parpal, Gustavsson, and Strålfors.
Strambio-de-Castillia, C., Blobel, G., and Rout, M. P. Isolation and characterization of nuclear envelopes from the yeast *Saccharomyces*. 131:19.
Strand, D. *See* Török, Strand, Schmitt, Tick, Török, Kiss, and Mechler.
Streuli, C. H., Schmidhauser, C., Bailey, N., Yurchenco, P., Skubitz, A. P. N., Roskelley, C., and Bissell, M. J. Laminin mediates tissue-specific gene expression in mammary epithelia. 129:591.
Strickland, D. *See* FitzGerald, Fryling, Zdanovsky, Saelinger, Kounnas, Winkles, Strickland, and Leppla.
Stroeken, P. J. M. *See* Driessens, Stroeken, Rodriguez Erena, van der Valk, van Rijthoven, and Roos.
Strube, M. S. *See* Haney, Levy, Strube, and Mueckler.
Strunnikov, A. V., Kingsbury, J., and Koshland, D. *CEP3* encodes a centromere protein of *Saccharomyces cerevisiae*. 128:749.
Strutz, F., Okada, H., Lo, C. W., Danoff, T., Carone, R. L., Tomaszewski, J. E., and Neilson, E. G. Identification and characterization of a fibroblast marker: FSP1. 130:393.
Stuermer, C. A. O. *See* Bastmeyer, Ott, Leppert, and Stuermer.
Stuppia, L. *See* Screpanti, Scarpa, Meco, Bellavia, Stuppia, Frati, Modesti, and Gulino.
Subramani, S. *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.
Subtil, A. *See* Hémar, Subtil, Lieb, Morelon, Hellio, and Dautry-Varsat.
Suda, T. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.
Südhof, T. C. *See* Stenius, Janz, Südhof, and Jahn.
Sugi, Y. *See* Byeon, Sugi, Markwald, and Hoffman.
Sugimoto, M. *See* Ninomiya, Kagawa, Iyama, Naito, Kishiro, Seyer, Sugimoto, Oohashi, and Sado.
Sugimura, T. *See* Ochiya, Sakamoto, Tsukamoto, Sugimura, and Terada.
Sugiura, H. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Sullivan, R., and Lo, C. W. Expression of a connexin 43/β-galactosidase fusion protein inhibits gap junctional communication in NIH3T3 cells. 130:419.
Sun, H.-Q., Kwiatkowska, K., Wooten, D. C., and Yin, H. L. Effects of CapG overexpression on agonist-induced motility and second messenger generation. 129:147.
Sun, X.-H., Protasi, F., Takahashi, M., Takeshima, H., Ferguson, D. G., and Franzini-Armstrong, C. Molecular architecture of membranes involved in excitation–contraction coupling of cardiac muscle. 129:659.
Sun, Y. *See* Wanker, Sun, Savitz, and Meyer.
Suter, D. M., Pollerberg, G. E., Buchstaller, A., Giger, R. J., Dreyer, W. J., and Sonderegger, P. Binding between the neural cell adhesion molecules axonin-1 and Nr-CAM/Bravo is involved in neuron–glia interaction. 131:1067.
Suzuki, A., Yoshida, M., and Ozawa, E. Mammalian α1- and β1-syntrophin bind to the alternative splice-prone region of the dystrophin COOH terminus. 128:373.
Suzuki, T. *See* Nakamura, Yamamoto, Nishitani, Matozaki, Suzuki, Wakabayashi, Shigekawa, and Goshima.
Svitkina, T. M. *See* Verkhovsky, Svitkina, and Borisy.
Swanson, J. A. *See* Berthiaume, Medina, and Swanson.
Swaroop, A. *See* Shaywitz, Orci, Ravazzola, Swaroop, and Kaiser.
Swayne, T. C. *See* Simon, Swayne, and Pon.
Swenson, K. I. *See* Turner, Minkoff, Martin, Misra, and Swenson.
Sym, M., and Roeder, G. S. Zipl-induced changes in synaptonemal complex structure and polycomplex assembly. 128:455.
Szilard, R. K., Titorenko, V. I., Veenhuis, M., and Rachubinski, R. A. Pay32p of the yeast *Yarrowia lipolytica* is an intraperoxisomal component of the matrix protein translocation machinery. 131:1453.

T

Tabak, H. F. *See* Motley, Lumb, Oatey, Jennings, De Zoysa, Wanders, Tabak, and Danpure.
Tachibana, K. *See* Ookata, Hisanaga, Bulinski, Murofushi, Aizawa, Itoh, Hotani, Okumura, Tachibana, and Kishimoto.
Tagawa, T., Kuroki, T., Vogt, P. K., and Chida, K. The cell cycle–dependent nuclear import of v-Jun is regulated by phosphorylation of a serine adjacent to the nuclear localization signal. 130:255.
Tajbakhsh, S. *See* Kelly, Alonso, Tajbakhsh, Cossu, and Buckingham.
Tajima, S. *See* Miller, Tajima, Lauffer, and Walter.
Takahashi, M. *See* Sun, Protasi, Takahashi, Takeshima, Ferguson, and Franzini-Armstrong.
Takahashi, N. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.
Takahashi, T. *See* Takei, Harada, Takeda, Kobayashi, Terada, Noda, Takahashi, and Hirokawa.
Takai, Y. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Takebayashi, T., Iwamoto, M., Jikko, A., Matsumura, T., Enomoto-Iwamoto, M., Myoukai, F., Koyama, E., Yamaai, T., Matsumoto, K., Nakamura, T., Kurisu, K., and Noji, S. Hepatocyte growth factor/scatter factor modulates cell motility, proliferation, and proteoglycan synthesis of chondrocytes. 129:1411.
Takeda, H., Nagafuchi, A., Yonemura, S., Tsukita, S., Behrens, J., Birchmeier, W., and Tsukita, S. V-src kinase shifts the cadherin-based cell adhesion from the strong to the weak state and β catenin is not required for the shift. 131:1839.
Takeda, S. *See* Takei, Harada, Takeda, Kobayashi, Terada, Noda, Takahashi, and Hirokawa.
Takegawa, K. *See* Stack, DeWald, Takegawa, and Emr.
Takei, K. *See* Chilcote, Galli, Mundigl, Edelmann, McPherson, Takei, and De Camilli.
— *See* Garcia, McPherson, Chilcote, Takei, and De Camilli.
Takei, Y., Harada, A., Takeda, S., Kobayashi, K., Terada, S., Noda, T., Takahashi, T., and Hirokawa, N. Synapsin I deficiency results in the structural change in the presynaptic terminals in the murine nervous system. 131:1789.
Takeichi, M. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
Takeshima, H. *See* Sun, Protasi, Takahashi, Takeshima, Ferguson, and Franzini-Armstrong.
Takeuchi, K. *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
Tam, P. P. L. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.

Tan, X., Waterham, H. R., Veenhuis, M., and Cregg, J. M. The *Hansenula polymorpha PER8* gene encodes a novel peroxisomal integral membrane protein involved in proliferation. 128:307.
Tanaka, E., Ho, T., and Kirschner, M. W. The role of microtubule dynamics in growth cone motility and axonal growth. 128:127.
—, and Kirschner, M. W. The role of microtubules in growth cone turning at substrate boundaries. 128:139.
Tanczos, E. *See* Bennett, Jackson, Simon, Tanczos, Peach, Modrell, Stamenkovic, Plowman, and Aruffo.
Taneja, K. L., McCurrach, M., Schalling, M., Housman, D., and Singer, R. H. Foci of trinucleotide repeat transcripts in nuclei of myotonic dystrophy cells and tissues. 128:995.
Tang, L. Z. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Taniguchi, N. *See* Higashiyama, Iwamoto, Goishi, Raab, Taniguchi, Klagsbrun, and Mekada.
Taniura, H., Glass, C., and Gerace, L. A chromatin binding site in the tail domain of nuclear lamins that interacts with core histones. 131:33.
Taraboulos, A., Scott, M., Semenov, A., Avraham, D., Laszlo, L., and Prusiner, S. B. Cholesterol depletion and modification of COOH-terminal targeting sequence of the prion protein inhibit formation of the scrapie isoform. 129:121. Correction. 130:501.
Tárnok, A. *See* Nörenberg, Hubert, Brümmendorf, Tárnok, and Rathjen.
Tatchell, K. *See* Karpova, Tatchell, and Cooper.
Tauber, R. *See* Steverding, Stierhof, Fuchs, Tauber, and Overath.
— *See* Volz, Orberger, Porwoll, Hauri, and Tauber.
Taylor-Papadimitriou, J. *See* Lu, Lu, Rughetti, and Taylor-Papadimitriou.
Teal, S. B. *See* Peters, Hsu, Ooi, Finazzi, Teal, Oorschot, Donaldson, and Klausner.
ten Dijke, P. *See* Yamashita, ten Dijke, Huylebroeck, Sampath, Andries, Smith, Heldin, and Miyazono.
Teplow, D. B. *See* Haass, Koo, Capell, Teplow, and Selkoe.
Terada, M. *See* Ochiya, Sakamoto, Tsukamoto, Sugimura, and Terada.
Terada, S. *See* Takei, Harada, Takeda, Kobayashi, Terada, Noda, Takahashi, and Hirokawa.
Teramoto, H. *See* Miyamoto, Teramoto, Coso, Silvio Gutkind, Burbelo, Akiyama, and Yamada.
Terasaki, M. *See* Whalley, Terasaki, Cho, and Vogel.
TerBush, D. R., and Novick, P. Sec6, Sec8, and Sec15 are components of a multisubunit complex which localizes to small bud tips in *Saccharomyces cerevisiae*. 130:299.
Teung, P. *See* Espenshade, Gimeno, Holzmacher, Teung, and Kaiser.
Thatikunta, P. *See* Haas, Thatikunta, Steplewski, Johnson, Khalili, and Amini.
Thesleff, I. *See* Mitsiadis, Lardelli, Lendahl, and Thesleff.
— *See* Mitsiadis, Muramatsu, Muramatsu, and Thesleff.
Thiery, J. P. *See* Beauvais, Erickson, Goins, Craig, Humphries, Thiery, and Dufour.
— *See* Rodier, Vallés, Denoyelle, Thiery, and Boyer.
Thompson, E. A. *See* Sluder, Thompson, Rieder, and Miller.
Thon, V. *See* Shattil, O'Toole, Eigenthaler, Thon, Williams, Babior, and Ginsberg.
Tick, G. *See* Török, Strand, Schmitt, Tick, Török, Kiss, and Mechler.
Tilney, L. G., Tilney, M. S., and Guild, G. M. F actin bundles in *Drosophila* bristles I. Two filament cross-links are involved in bundling. 130:629.
Tilney, M. S. *See* Tilney, Tilney, and Guild.
Timans, J. *See* Jackson, Bell, Dickinson, Timans, Shields, and Whittle.
Timberlake, W. E. *See* Fischer and Timberlake.
Timmusk, T., Lendahl, U., Funakoshi, H., Arenas, E., Persson, H., and Metsis, M. Identification of brain-derived neurotrophic factor promoter regions mediating tissue-specific, axotomy-, and neuronal activity–induced expression in transgenic mice. 128:185.
— *See* Trupp, Rydén, Jörnvall, Funakoshi, Timmusk, Arenas, and Ibáñez.
Timpl, R. *See* Fässler, Pfaff, Murphy, Noegel, Johansson, Timpl, and Albrecht.
Titorenko, V. I. *See* Szilard, Titorenko, Veenhuis, and Rachubinski.
Titus, M. A. *See* Novak, Peterson, Reedy, and Titus.
Todorov, I. T., Attaran, A., and Kearsey, S. E. BM28, a human member of the MCM2-3-5 family, is displaced from chromatin during DNA replication. 129:1433.
Tomaszewski, J. E. *See* Strutz, Okada, Lo, Danoff, Carone, Tomaszewski, and Neilson.
Tonks, N. K. *See* Brady-Kalnay, Rimm, and Tonks.
Török, C. *See* Frisén, Johansson, Török, Risling, and Lendahl.
Török, I., Strand, D., Schmitt, R., Tick, G., Török, T., Kiss, I., and Mechler, B. M. The *overgrown hematopoietic organs-31* tumor suppressor gene of *Drosophila* encodes an *Importin*-like protein accumulating in the nucleus at the onset of mitosis. 129:1473.
Török, T. *See* Török, Strand, Schmitt, Tick, Török, Kiss, and Mechler.
Trainor, P. A. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.
Trapp, B. D. *See* Bö, Quarles, Fujita, Bartoszewicz, Sato, and Trapp.
Trask, B. J. *See* Yokota, van den Engh, Hearst, Sachs, and Trask.
Traub, O. *See* Elfgang, Eckert, Lichtenberg-Fraté, Butterweck, Traub, Klein, Hülser, and Willecke.
Tremblay, J. P. *See* Vilquin, Wagner, Kinoshita, Roy, and Tremblay.
Tremble, P., Damsky, C. H., and Werb, Z. Components of the nuclear signaling cascade that regulate collagenase gene expression in response to integrin-derived signals. 129:1707.
Tremble, P. M. *See* Huhtala, Humphries, McCarthy, Tremble, Werb, and Damsky.
Trinick, J. *See* Houmeida, Holt, Tskhovrebova, and Trinick.
Trojanowski, J. Q. *See* Tu, Elder, Lazzarini, Nelson, Trojanowski, and Lee.
Trueb, B. *See* Koch, Bohrmann, Matthison, Hagios, Trueb, and Chiquet.
Trueheart, J. *See* Elion, Trueheart, and Fink.
Trupp, M., Rydén, M., Jörnvall, H., Funakoshi, H., Timmusk, T., Arenas, E., and Ibáñez, C. F. Peripheral expression and biological activities of GDNF, a new neurotrophic factor for avian and mammalian peripheral neurons. 130:137.
Tskhovrebova, L. *See* Houmeida, Holt, Tskhovrebova, and Trinick.
Tsujimura, K. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Tsukamoto, M. *See* Ochiya, Sakamoto, Tsukamoto, Sugimura, and Terada.
Tsukita, S. *See* Takeda, Nagafuchi, Yonemura, Tsukita, Behrens, Birchmeier, and Tsukita.
Tu, H.-Y. *See* Pellman, Bagget, Tu, and Fink.
Tu, P.-H., Elder, G., Lazzarini, R. A., Nelson, D., Trojanowski, J. Q., and Lee, V. M.-Y. Overexpression of the human NFM subunit in transgenic mice modifies the level of endogenous NFL and the phosphorylation state of NFH subunits. 129:1629.
Turck, C. W. *See* Kellogg, Kikuchi, Fujii-Nakata, Turck, and Murray.
Turksen, K. *See* Lloyd, Yu, Cheng, Turksen, Degenstein, Hutton, and Fuchs.
Turner, J. E., Minkoff, C. G., Martin, K. H., Misra, R., and Swenson, K. I. Oocyte activation and passage through the metaphase/anaphase transition of the meiotic cell cycle is blocked in clams by inhibitors of HMG-CoA reductase activity. 128:1145.
Turowski, P., Fernandez, A., Favre, B., Lamb, N. J. C., and Hemmings, B. A. Differential methylation and altered conformation of cytoplasmic and nuclear forms of protein phosphatase 2A during cell cycle progression. 129:397.
Turtzo, L. C. *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.

U

Uherek, C. *See* Piali, Hammel, Uherek, Bachmann, Gisler, Dunon, and Imhof.
Ulisse, S. *See* Gnessi, Emidi, Jannini, Carosa, Maroder, Arizzi, Ulisse, and Spera.
Ullrich, S. *See* Vozzi, Ullrich, Charollais, Philippe, Orci, and Meda.
Urata, Y., Parmelee, S. J., Agard, D. A., and Sedat, J. W. A three-dimensional structural dissection of *Drosophila* polytene chromosomes. 131:279.

V

Vacquier, V. D. *See* Shaw, Fortes, Stout, and Vacquier.
Vaghy, P. L. *See* Lewis Carl, Felix, Caswell, Brandt, Ball, Vaghy, Meissner, and Ferguson.

Vaheri, A. *See* Zheng, Saksela, Matikainen, and Vaheri.
Valkema, R. *See* Wu, Valkema, Van Haastert, and Devreotes.
Vallee, R. B. *See* Gammie, Kurihara, Vallee, and Rose.
— *See* Vaughan and Vallee.
Vallés, A. M. *See* Rodier, Vallés, Denoyelle, Thiery, and Boyer.
Valtorta, F. *See* Ceccaldi, Grohovaz, Benfenati, Chieregatti, Greengard, and Valtorta.
Valtz, N., Peter, M., and Herskowitz, I. *FAR1* is required for oriented polarization of yeast cells in response to mating pheromones. 131:863.
Vance, D. E. *See* Posse de Chaves, Vance, Campenot, and Vance.
Vance, J. E. *See* Posse de Chaves, Vance, Campenot, and Vance.
Vandekerckhove, J. *See* Chaponnier, Goethals, Janmey, Gabbiani, Gabbiani, and Vandekerckhove.
van den Berg, C. W., Cinek, T., Hallett, M. B., Horejsi, V., and Morgan, B. P. Exogenous glycosyl phosphatidylinositol–anchored CD59 associates with kinases in membrane clusters on U937 cells and becomes Ca^{2+}-signaling competent. 131:669.
van den Engh, G. *See* Yokota, van den Engh, Hearst, Sachs, and Trask.
van der Bliek, A. M. *See* Damke, Baba, van der Bliek, and Schmid.
Van der Eb, A. J. *See* Kranenburg, Scharnhorst, Van der Eb, and Zantema.
van der Valk, M. A. *See* Driessens, Stroeken, Rodriguez Erena, van der Valk, van Rijthoven, and Roos.
van der Valk, S. W. *See* Wesseling, van der Valk, Vos, Sonnenberg, and Hilkens.
van der Zee, S. *See* Bregman, Du, van der Zee, and Warren.
van Deurs, B. *See* Danielsen and van Deurs.
van Dijk, M. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
van Dongen, G. A. M. S. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
van Donselaar, E. *See* Marks, Roche, van Donselaar, Woodruff, Peters, and Bonifacino.
van Essen, H. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
van Genderen, I., and van Meer, G. Differential targeting of glucosylceramide and galactosylceramide analogues after synthesis but not during transcytosis in Madin-Darby canine kidney cells. 131:645.
Van Haastert, P. J. M. *See* Wu, Valkema, Van Haastert, and Devreotes.
— *See* Yuen, Jain, Bishop, Lindsey, Deery, Van Haastert, and Gomer.
van Meer, G. *See* Mays, Siemers, Fritz, Lowe, van Meer, and Nelson.
— *See* van Genderen and van Meer.
van Rijthoven, E. A. M. *See* Driessens, Stroeken, Rodriguez Erena, van der Valk, van Rijthoven, and Roos.
van Santen, H. M. *See* Raposo, van Santen, Leijendekker, Geuze, and Ploegh.
van Weert, A. W. M., Dunn, K. W., Geuze, H. J., Maxfield, F. R., and Stoorvogel, W. Transport from late endosomes to lysosomes, but not sorting of integral membrane proteins in endosomes, depends on the vacuolar proton pump. 130:821.
Vaschieri, C. *See* Zambruno, Marchisio, Marconi, Vaschieri, Melchiori, Giannetti, and De Luca.
Västrik, I., Kaipainen, A., Penttilä, T.-L., Lymboussakis, A., Alitalo, R., Parvinen, M., and Alitalo, K. Expression of the *mad* gene during cell differentiation in vivo and its inhibition of cell growth in vitro. 128:1197.
Vaughan, K. T., and Vallee, R. B. Cytoplasmic dynein binds dynactin through a direct interaction between the intermediate chains and $p150^{Glued}$. 131:1507.
Veenhuis, M. *See* Marshall, Krimkevich, Lark, Dyer, Veenhuis, and Goodman.
— *See* Szilard, Titorenko, Veenhuis, and Rachubinski.
— *See* Tan, Waterham, Veenhuis, and Cregg.
Venuti, J. M., Morris, J. H., Vivian, J. L., Olson, E. N., and Klein, W. H. Myogen is required for late but not early aspects of myogenesis during mouse development. 128:563.
Verde, F., Mata, J., and Nurse, P. Fission yeast cell morphogenesis: Identification of new genes and analysis of their role during the cell cycle. 131:1529.
Verhey, K. J., Yeh, J.-I., and Birnbaum, M. J. Distinct signals in the GLUT4 glucose transporter for internalization and for targeting to an insulin-responsive compartment. 130:1071.
Verkhovsky, A. B., Svitkina, T. M., and Borisy, G. G. Myosin II filament assemblies in the active lamella of fibroblasts: Their morphogenesis and role in the formation of actin filament bundles. 131:989.
Verni, F. *See* Gunsalus, Bonaccorsi, Williams, Verni, Gatti, and Goldberg.
Vida, T. A., and Emr, S. D. A new vital stain for visualizing vacuolar membrane dynamics and endocytosis in yeast. 128:779.
Vijayasaradhi, S., Xu, Y., Bouchard, B., and Houghton, A. N. Intracellular sorting and targeting of melanosomal membrane proteins: identification of signals for sorting of the human brown locus protein, GP75. 130:807.
Villa, A. *See* Raichman, Panzeri, Clementi, Papazafiri, Eckley, Clegg, Villa, and Meldolesi.
Vilquin, J.-T., Wagner, E., Kinoshita, I., Roy, R., and Tremblay, J. P. Successful histocompatible myoblast transplantation in dystrophin-deficient mdx mouse despite the production of antibodies against dystrophin. 131:975.
Vivian, J. L. *See* Venuti, Morris, Vivian, Olson, and Klein.
Vogel, S. S. *See* Whalley, Terasaki, Cho, and Vogel.
Vogt, P. K. *See* Tagawa, Kuroki, Vogt, and Chida.
Volz, B., Orberger, G., Porwoll, S., Hauri, H.-P., and Tauber, R. Selective reentry of recycling cell surface glycoproteins to the biosynthetic pathway in human hepatocarcinoma HepG2 cells. 130:537.
von Arx, P., Bantle, S., Soldati, T., and Perriard, J.-C. Dominant negative effect of cytoplasmic actin isoproteins on cardiomyocyte cytoarchitecture and function. 131:1759.
von Dassow, G., and Schubiger, G. How an actin network might cause fountain streaming and nuclear migration in the syncytial *Drosophila* embryo: Correction. 130:1231.
von Mollard, G. F. *See* Walch-Solimena, Blasi, Edelmann, Chapman, von Mollard, and Jahn.
von Poser, C. *See* de Hoop, von Poser, Lange, Ikonen, Hunziker, and Dotti.
Vore, M. *See* Albers, Davis, Perrone, Lee, Liu, and Vore.
Vos, H. L. *See* Wesseling, van der Valk, Vos, Sonnenberg, and Hilkens.
Vozzi, C., Ullrich, S., Charollais, A., Philippe, J., Orci, L., and Meda, P. Adequate connexin-mediated coupling is required for proper insulin production. 131:1561.

W

Wade, R. H. *See* Hyman, Chrétien, Arnal, and Wade.
Waechter, C. J. *See* Rush and Waechter.
Wagenknecht, K. *See* Shutt, Wessels, Wagenknecht, Chandrasekhar, Hitt, Luna, and Soll.
Wagner, E. *See* Prchla, Plank, Wagner, Blaas, and Fuchs.
— *See* Vilquin, Wagner, Kinoshita, Roy, and Tremblay.
Wahlberg, J. M., Geffen, I., Reymond, F., Simmen, T., and Spiess, M. *trans*-Golgi retention of a plasma membrane protein: Mutations in the cytoplasmic domain of the asialoglycoprotein receptor subunit H1 result in *trans*-Golgi retention. 130:285.
— *See* Barth, Wahlberg, and Garoff.
Wai, A. W. K. *See* Cheah, Levy, Trainor, Wai, Kuffner, So, Leung, Lovell-Badge, and Tam.
Wakabayashi, S. *See* Nakamura, Yamamoto, Nishitani, Matozaki, Suzuki, Wakabayashi, Shigekawa, and Goshima.
Walch-Solimena, C., Blasi, J., Edelmann, L., Chapman, E. R., von Mollard, G. F., and Jahn, R. The t-SNAREs syntaxin 1 and SNAP-25 are present on organelles that participate in synaptic vesicle recycling. 128:637.
Walensky, L. D., and Snyder, S. H. Inositol 1,4,5-trisphosphate receptors selectively localized to the acrosomes of mammalian sperm. 130:857.
Walker, D. M. *See* Pavalko, Walker, Graham, Goheen, Doerschuk, and Kansas.
Wallace, B. G. Regulation of the interaction of nicotinic acetylcholine receptors with the cytoskeleton by agrin-activated protein tyrosine kinase. 128:1121.
— *See* Meier, Perez, and Wallace.
Walter, P. *See* Miller, Tajima, Lauffer, and Walter.
Wanders, R. J. A. *See* Motley, Lumb, Oatey, Jennings, De Zoysa, Wanders, Tabak, and Danpure.

Wandinger-Ness, A. *See* Feng, Press, and Wandinger-Ness.
Wang, G.-M. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Wang, H.-G., Millan, J. A., Cox, A. D., Der, C. J., Rapp, U. R., Beck, T., Zha, H., and Reed, J. C. R-Ras promotes apoptosis caused by growth factor deprivation via a bcl-2 suppressible mechanism. 129:1103.
Wang, R.-R. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Wang, S., Sakai, H., and Wiedmann, M. NAC covers ribosome-associated nascent chains thereby forming a protective environment for regions of nascent chains just emerging from the peptidyl transferase center. 130:519.
Wang, S.-Z., and Adler, R. Chromokinesin: A DNA-binding, kinesin-like nuclear protein. 128:761.
Wang, Y.-L. *See* Jacobson, Cao, Wang, and Pederson.
Wanker, E. E., Sun, Y., Savitz, A. J., and Meyer, D. I. Functional characterization of the 180-kD ribosome receptor in vivo. 130:29.
Ward, D. M., Perou, C. M., Lloyd, M., and Kaplan, J. "Synchronized" endocytosis and intracellular sorting in alveolar macrophages: The early sorting endosome is a transient organelle. 129:1229.
Ward, R. D. *See* Robbins, Ward, and Oliver.
Ward, S. C. *See* Nicklas, Ward, and Gorbsky.
Warren, G. *See* Misteli and Warren.
— *See* Nakamura, Rabouille, Watson, Nilsson, Hui, Slusarewicz, Kreis, and Warren.
— *See* Rabouille, Misteli, Watson, and Warren.
Warren, K. S., Lin, J. L.-C., McDermott, J. P., and Lin, J. J.-C. Forced expression of chimeric human fibroblast tropomyosin mutants affects cytokinesis. 129:697.
Warren, S. L. *See* Bregman, Du, van der Zee, and Warren.
Watanabe, K., Yamada, H., and Yamaguchi, Y. K-Glypican: A novel GPI-anchored heparan sulfate proteoglycan that is highly expressed in developing brain and kidney. 130:1207.
Waterham, H. R. *See* Tan, Waterham, Veenhuis, and Cregg.
Waterman-Storer, C. M., Gregory, J., Parsons, S. F., and Salmon, E. D. Membrane/microtubule tip attachment complexes (TACs) allow the assembly dynamics of plus ends to push and pull membranes into tubulovesicular networks in interphase *Xenopus* egg extracts. 130:1161.
Watkins, J. L. *See* Iovine, Watkins, and Wente.
Watson, R. *See* Nakamura, Rabouille, Watson, Nilsson, Hui, Slusarewicz, Kreis, and Warren.
— *See* Rabouille, Misteli, Watson, and Warren.
Watt, F. M. *See* Hotchin, Gandarillas, and Watt.
Way, M., Sanders, M., Garcia, C., Sakai, J., and Matsudaira, P. Sequence and domain organization of scruin, an actin–cross-linking protein in the acrosomal process of *Limulus* sperm. 128:51.
Wayman, G. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Webb, H. M. *See* Lencer, Constable, Moe, Jobling, Webb, Ruston, Madara, Hirst, and Holmes.
Weber, K. *See* Huttenlauch, Geisler, Plessmann, Peck, Weber, and Stick.
Weghuis, D. O. *See* Brakenhoff, Gerretsen, Knippels, van Dijk, van Essen, Weghuis, Sinke, Snow, and van Dongen.
Weidner, K. M. *See* Brinkmann, Foroutan, Sachs, Weidner, and Birchmeier.
— *See* Yang, Spitzer, Meyer, Sachs, Niemann, Hartmann, Weidner, Birchmeier, and Birchmeier.
Weise, C. *See* Grandi, Emig, Weise, Hucho, Pohl, and Hurt.
Weisenberger, D., and Scheer, U. A possible mechanism for the inhibition of ribosomal RNA gene transcription during mitosis. 129:561.
Weisman, L. S. *See* Nicolson, Weisman, Payne, and Wickner.
Weiss, M. *See* Li, Kuszak, Dunn, Wang, Ma, Wang, Spector, Leib, Cotliar, Weiss, Espy, Howard, Farris, Auran, Donn, Hofeldt, Mackay, Merriam, Mittl, and Smith.
Weller, U. *See* Sadoul, Lang, Montecucco, Weller, Regazzi, Catsicas, Wollheim, and Halban.
Wente, S. R. *See* Iovine, Watkins, and Wente.
Werb, Z. *See* Huhtala, Humphries, McCarthy, Tremble, Werb, and Damsky.
— *See* Tremble, Damsky, and Werb.
Wesseling, J., van der Valk, S. W., Vos, H. L., Sonnenberg, A., and Hilkens, J. Episialin (MUC1) overexpression inhibits integrin-mediated cell adhesion to extracellular matrix components. 129:255.
Wessels, D. *See* Shutt, Wessels, Wagenknecht, Chandrasekhar, Hitt, Luna, and Soll.
West, R. R. *See* McIntosh and West.
Westphale, E. M. *See* Koval, Geist, Westphale, Kemendy, Civitelli, Beyer, and Steinberg.
Whalley, T., Terasaki, M., Cho, M.-S., and Vogel, S. S. Direct membrane retrieval into large vesicles after exocytosis in sea urchin eggs. 131:1183.
Wheaton, V. I. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Wheelock, M. J. *See* Knudsen, Soler, Johnson, and Wheelock.
— *See* Shibamoto, Hayakawa, Takeuchi, Hori, Miyazawa, Kitamura, Johnson, Wheelock, Matsuyoshi, Takeichi, and Ito.
— *See* Wiemer, Nuttley, Bertolaet, Li, Francke, Wheelock, Anné, Johnson, and Subramani.
White, E. *See* Martinou, Fernandez, Missotten, White, Allet, Sadoul, and Martinou.
White, J. M. *See* Melikyan, White, and Cohen.
— *See* Wolfsberg, Primakoff, Myles, and White.
Whitfield, W. G. F. *See* Oegema, Whitfield, and Alberts.
Whittle, N. *See* Jackson, Bell, Dickinson, Timans, Shields, and Whittle.
Wickner, W. T. *See* Nicolson, Weisman, Payne, and Wickner.
Wiedmann, M. *See* Wang, Sakai, and Wiedmann.
Wiemer, E. A. C., Nuttley, W. M., Bertolaet, B. L., Li, X., Francke, U., Wheelock, M. J., Anné, U. K., Johnson, K. R., and Subramani, S. Human peroxisomal targeting signal-1 receptor restores peroxisomal protein import in cells from patients with fatal peroxisomal disorders. 130:51.
Wilkerson, C. G., King, S. M., Koutoulis, A., Pazour, G. J., and Witman, G. B. The 78,000 M_r intermediate chain of *Chlamydomonas* outer arm dynein is a WD-repeat protein required for arm assembly. 129:169.
— *See* King, Patel-King, Wilkerson, and Witman.
Willecke, K. *See* Elfgang, Eckert, Lichtenberg-Fraté, Butterweck, Traub, Klein, Hülser, and Willecke.
Williams, B. C., Riedy, M. F., Williams, E. V., Gatti, M., and Goldberg, M. L. The *Drosophila* kinesin-like protein KLP3A is a midbody component required for central spindle assembly and initiation of cytokinesis. 129:709.
Williams, E. *See* Gunsalus, Bonaccorsi, Williams, Verni, Gatti, and Goldberg.
Williams, E. V. *See* Williams, Riedy, Williams, Gatti, and Goldberg.
Williams, M. *See* Shattil, O'Toole, Eigenthaler, Thon, Williams, Babior, and Ginsberg.
Winardi, R *See* Discher, Winardi, Schischmanoff, Parra, Conboy, and Mohai as.
Winberg, J.-O. *See* Bruckner-Tuderman, Nilssen, Zimmermann, Dours-Zimmermann, Kalinke, Gedde-Dahl, and Winberg.
Winey, M., Mamay, C. L., O'Toole, E. T., Mastronarde, D. N., Giddings, T. H., Jr., McDonald, K. L., and McIntosh, J. R. Three-dimensional ultrastructural analysis of the *Saccharomyces cerevisiae* mitotic spindle. 129:1601.
Winkfein, R. J. *See* Liao, Winkfein, Mack, Rattner, and Yen.
Winkles, J. A. *See* FitzGerald, Fryling, Zdanovsky, Saelinger, Kounnas, Winkles, Strickland, and Leppla.
Witman, G. B. *See* King, Patel-King, Wilkerson, and Witman.
— *See* Pazour, Sineshchekov, and Witman.
— *See* Wilkerson, King, Koutoulis, Pazour, and Witman.
Witzemann, V. *See* Kues, Brenner, Sakmann, and Witzemann.
Wolfs, K. *See* Opstelten, Raamsman, Wolfs, Horzinek, and Rottier.
Wolfsberg, T. G., Primakoff, P., Myles, D. G., and White, J. M. Adam, a novel family of membrane proteins containing a disintegrin and metalloprotease domain: Multipotential functions in cell–cell and cell–matrix interactions. 131:275.
Wolin, S. L. *See* Matera, Frey, Margelot, and Wolin.
Wollheim, C. B. *See* Sadoul, Lang, Montecucco, Weller, Regazzi, Catsicas, Wollheim, and Halban.
Wong, P. C., Marszalek, J., Crawford, T. O., Xu, Z., Hsieh, S.-T., Griffin, J. W., and Cleveland, D. W. Increasing neurofilament subunit NF-M expression reduces axonal NF-H, inhibits radial growth, and results in neurofilamentous accumulation in motor neurons. 130:1413.

Wong, S. *See* Pasternak, Wong, and Elson.
Wong, S. T. *See* Mark, Liu, Wong, Hinds, and Storm.
Woodcock, C. L. *See* Bednar, Horowitz, Dubochet, and Woodcock.
Woodruff, L. *See* Marks, Roche, van Donselaar, Woodruff, Peters, and Bonifacino.
Woolf, A. S., Kolatsi-Joannou, M., Hardman, P., Andermarcher, E., Moorby, C., Fine, L. G., Jat, P. S., Noble, M. D., and Gherardi, E. Roles of hepatocyte growth factor/scatter factor and the met receptor in the early development of the metanephros. 128:171.
Wooten, D. C. *See* Sun, Kwiatkowska, Wooten, and Yin.
Wordeman, L., and Mitchison, T. J. Identification and partial characterization of mitotic centromere-associated kinesin, a kinesin-related protein that associates with centromeres during mitosis. 128:95.
Worman, H. J. *See* Soullam and Worman.
Wozney, J. M. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.
Wozniak, R. W. *See* Aitchison, Rout, Marelli, Blobel, and Wozniak.
Wright, R. *See* Lum and Wright.
Wu, H. *See* Liu, Wu, Byrne, Jeffrey, Krane, and Jaenisch.
Wu, L., Valkema, R., Van Haastert, P. J. M., and Devreotes, P. N. The G protein β subunit is essential for multiple responses to chemoattractants in *Dictyostelium*. 129:1667.
Wu, X. *See* Fan, Lu, Wu, DeBlasio, Koff, and Mendelsohn.
Wubbolts, R. W. *See* Gebbink, Zondag, Koningstein, Feiken, Wubbolts, and Moolenaar.
Wyatt, S., and Davies, A. M. Regulation of nerve growth factor receptor gene expression in sympathetic neurons during development. 130:1435.
Wysolmerski, R. B. *See* Goeckeler and Wysolmerski.

X

Xiao, Y., Grieshammer, U., and Rosenthal, N. Regulation of a muscle-specific transgene by retinoic acid. 129:1345.
Xie, J. *See* Li, Xie, Kantor, Koistinen, Altieri, Nortamo, and Gahmberg.
Xing, Y., Johnson, C. V., Moen, P. T., Jr., McNeil, J. A., and Bentley Lawrence, J. Nonrandom gene organization: Structural arrangements of specific pre-mRNA transcription and splicing with SC-35 domains. 131:1635.
Xu, X. *See* Muallem, Kwiatkowska, Xu, and Yin.
— *See* Piper, Xu, Russell, Little, and Landfear.
Xu, Y. *See* Vijayasaradhi, Xu, Bouchard, and Houghton.
Xu, Z. *See* Wong, Marszalek, Crawford, Xu, Hsieh, Griffin, and Cleveland.

Y

Yagita, H. *See* Ruppert, Aigner, Hubbe, Yagita, and Altevogt.
Yamaai, T. *See* Takebayashi, Iwamoto, Jikko, Matsumura, Enomoto-Iwamoto, Myoukai, Koyama, Yamaai, Matsumoto, Nakamura, Kurisu, and Noji.
Yamada, H. *See* Watanabe, Yamada, and Yamaguchi.
Yamada, K. M. *See* Miyamoto, Teramoto, Coso, Silvio Gutkind, Burbelo, Akiyama, and Yamada.
Yamaguchi, A. *See* Katagiri, Yamaguchi, Komaki, Abe, Takahashi, Ikeda, Rosen, Wozney, Fujisawa-Sehara, and Suda.
Yamaguchi, Y. *See* Watanabe, Yamada, and Yamaguchi.
Yamamoto, I. *See* Nakamura, Yamamoto, Nishitani, Matozaki, Suzuki, Wakabayashi, Shigekawa, and Goshima.
Yamamura, S. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Yamashita, H., ten Dijke, P., Huylebroeck, D., Sampath, T. K., Andries, M., Smith, J. C., Heldin, C.-H., and Miyazono, K. Osteogenic protein-1 binds to activin type II receptors and induces certain activin-like effects. 130:217.
Yamauchi, T. *See* Ogawara, Inagaki, Tsujimura, Takai, Sekimata, Ha, Imajoh-Ohmi, Hirai, Ohno, Sugiura, Yamauchi, and Inagaki.
Yamazaki, H., Nakata, T., Okada, Y., and Hirokawa, N. KIF3A/B: A heterodimeric kinesin superfamily protein that works as a microtubule plus end–directed motor for membrane organelle transport. 130:1387.
Yamazaki, T., Selkoe, D. J., and Koo, E. H. Trafficking of cell surface β-amyloid precursor protein: Retrograde and transcytotic transport in cultured neurons. 129:431.
Yan, H., and Newport, J. An analysis of the regulation of DNA synthesis by cdk2, Cip1, and licensing factor. 129:1.
Yanagida, M. *See* Hagan and Yanagida.
Yang, B. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Yang, H. *See* Piper, Cooper, Yang, and Stevens.
Yang, T., Kozopas, K. M., and Craig, R. W. The intracellular distribution and pattern of expression of Mcl-1 overlap with, but are not identical to, those of Bcl-2. 128:1173.
Yang, Y., Spitzer, E., Meyer, D., Sachs, M., Niemann, C., Hartmann, G., Weidner, K. M., Birchmeier, C., and Birchmeier, W. Sequential requirement of hepatocyte growth factor and neuregulin in the morphogenesis and differentiation of the mammary gland. 131:215.
Yatomi, Y. *See* Bornfeldt, Graves, Raines, Igarashi, Wayman, Yamamura, Yatomi, Sidhu, Krebs, Hakomori, and Ross.
Yee, A. G. *See* Goodearl, Yee, Sandrock, Corfas, and Fischbach.
Yeh, E., Skibbens, R. V., Cheng, J. W., Salmon, E. D., and Bloom, K. Spindle dynamics and cell cycle regulation of dynein in the budding yeast, *Saccharomyces cerevisiae*. 130:687.
Yeh, J.-I. *See* Verhey, Yeh, and Birnbaum.
Yen, T. J. *See* Liao, Winkfein, Mack, Rattner, and Yen.
— *See* Lombillo, Nislow, Yen, Gelfand, and McIntosh.
Yialamas, M. *See* Peters, John, Lu, Eicher, Higgins, Yialamas, Turtzo, Otsuka, and Lux.
Yin, H. L. *See* Muallem, Kwiatkowska, Xu, and Yin.
— *See* Sun, Kwiatkowska, Wooten, and Yin.
Ying, Y. *See* Smart, Ying, and Anderson.
Ying, Y.-S. *See* Conrad, Smart, Ying, Anderson, and Bloom.
Yokota, H., van den Engh, G., Hearst, J. E., Sachs, R. K., and Trask, B. J. Evidence for the organization of chromatin in megabase pair–sized loops arranged along a random walk path in the human G0/G1 interphase nucleus. 130:1239.
Yokoyama, N. *See* Melchior, Guan, Yokoyama, Nishimoto, and Gerace.
Yonemura, S. *See* Takeda, Nagafuchi, Yonemura, Tsukita, Behrens, Birchmeier, and Tsukita.
Yoshida, C. K. *See* Murphy-Erdosh, Yoshida, Paradies, and Reichardt.
Yoshida, M. *See* Suzuki, Yoshida, and Ozawa.
Yu, Q.-C. *See* Lloyd, Yu, Cheng, Turksen, Degenstein, Hutton, and Fuchs.
Yu, W. *See* Sharp, Yu, and Baas.
Yuen, I. S., Jain, R., Bishop, J. D., Lindsey, D. F., Deery, W. J., Van Haastert, P. J. M., and Gomer, R. H. A density-sensing factor regulates signal transduction in *Dictyostelium*. 129:1251.
Yurchenco, P. *See* Streuli, Schmidhauser, Bailey, Yurchenco, Skubitz, Roskelley, and Bissell.

Z

Zacchetti, D. *See* Lorenzon, Zacchetti, Codazzi, Fumagalli, Meldolesi, and Grohovaz.
Zambruno, G., Marchisio, P. C., Marconi, A., Vaschieri, C., Melchiori, A., Giannetti, A., and De Luca, M. Transforming growth factor-β1 modulates β1 and β5 integrin receptors and induces the de novo expression of the $\alpha v\beta 6$ heterodimer in normal human keratinocytes: Implications for wound healing. 129:853.
Zanin, M. K. B. *See* Balsamo, Ernst, Zanin, Hoffman, and Lilien.
Zantema, A. *See* Kranenburg, Scharnhorst, Van der Eb, and Zantema.
Zarnegar, R., and Michalopoulos, G. K. The many faces of hepatocyte growth factor: From hepatopoiesis to hematopoiesis. 129:1177.
Zdanovsky, A. *See* FitzGerald, Fryling, Zdanovsky, Saelinger, Kounnas, Winkles, Strickland, and Leppla.
Zetter, B. R. *See* Kundra, Anand-Apte, Feig, and Zetter.

Zha, H. *See* Wang, Millan, Cox, Der, Rapp, Beck, Zha, and Reed.
Zhai, Y., Kronebusch, P. J., and Borisy, G. G. Kinetochore microtubule dynamics and the metaphase–anaphase transition. 131: 721.
Zhang, D., and Nicklas, R. B. Chromosomes initiate spindle assembly upon experimental dissolution of the nuclear envelope in grasshopper spermatocytes. 131:1125.
—, and Nicklas, R. B. The impact of chromosomes and centrosomes on spindle assembly as observed in living cells. 129:1287.
Zhang, H., Hu, W., and Ramirez, F. Developmental expression of fibrillin genes suggests heterogeneity of extracellular microfibrils. 129:1165.
Zhang, J. S., and Longo, F. M. LAR tyrosine phosphatase receptor: Alternative splicing is preferential to the nervous system, coordinated with cell growth and generates novel isoforms containing extensive CAG repeats. 128:415.
Zhang, J. W., and Lazarow, P. B. *PEB1 (PAS7)* in *Saccharomyces cerevisiae* encodes a hydrophilic, intra-peroxisomal protein that is a member of the WD repeat family and is essential for the import of thiolase into peroxisomes. 129:65.
Zhang, Y. Y. *See* Otsuka, Franco, Yang, Shim, Tang, Zhang, Boontrakulpoontawee, Jeyaprakash, Hedgecock, Wheaton, and Sobery.
Zhang, Z. *See* Nakagawa, Chen, Zhang, Kanai, and Hirokawa.
Zheng, J., Saksela, O., Matikainen, S., and Vaheri, A. Keratinocyte growth factor is a bifunctional regulator of HPV16 DNA-immortalized cervical epithelial cells. 129:843.
Zheng, Y. *See* Li, Zheng, and Drubin.
Zheng, Z., Katoh, S., He, Q., Oritani, K., Miyake, K., Lesley, J., Hyman, R., Hamik, A., Parkhouse, R. M. E., Farr, A. G., and Kincade, P. W. Monoclonal antibodies to CD44 and their influence on hyaluronan recognition. 130:485.
Zhou, J. *See* Staudinger, Zhou, Burgess, Elledge, and Olson.
Zhu, X., and Lindberg, I. 7B2 facilitates the maturation of proPC2 in neuroendocrine cells and is required for the expression of enzymatic activity. 129:1641.
Zimmer, W. E. *See* Balczon, Bao, Zimmer, Brown, Zinkowski, and Brinkley.
Zimmermann, D. R. *See* Bruckner-Tuderman, Nilssen, Zimmermann, Dours-Zimmermann, Kalinke, Gedde-Dahl, and Winberg.
Zinkowski, R. P. *See* Balczon, Bao, Zimmer, Brown, Zinkowski, and Brinkley.
Zondag, G. C. M. *See* Gebbink, Zondag, Koningstein, Feiken, Wubbolts, and Moolenaar.
Zorn, E. *See* Petit, Lecoeur, Zorn, Dauguet, Mignotte, and Gougeon.
Zurzolo, C. *See* Marrs, Andersson-Fisone, Jeong, Cohen-Gould, Zurzolo, Nabi, Rodriguez-Boulan, and Nelson.

SUBJECT INDEX VOLUMES 128–131

A431 cells, oligomerization of epidermal growth factor receptors on, time-resolved fluorescence imaging microscopy, stereochemical model for tyrosine kinase receptor activation, 129:1543
Abalone, sperm lysin dimer of, crystal structure, egg envelopes dissociate dimers, monomer is active species, 130:1117
ABP-120 protein, genetic deletion of alters actin filaments, *Dictyostelium* pseudopods, 128:819
Acanthamoeba, sequences, structural models, and cellular localization of actin-related proteins Arp2 and Arp3 from, 131:385
Acanthamoeba castellanii, quantification and localization of phosphorylated myosin I isoforms in, 130:591
Acetylated low density lipoproteins, sequestration of, cholesterol crystals, human monocyte-derived macrophages, 129:133
Acetylation, of lysine 40 in α-tubulin is not essential in *Tetrahymena thermophila*, 129:1301
Acetylcholine receptor, local neurotrophic repression of gene transcripts encoding fetal, rat neuromuscular synapses, 130:949
Acetylcholine receptor-aggregating activity of agrin isoforms, mapping of active site, 128:625
Acetylcholine receptor-inducing activity
  is concentrated in synaptic basal lamina of developing chick neuromuscular junction, 130:1423
  released from extracellular matrix through cleavage of a heparin-binding domain, 130:127
Acinar cell, insulation of G-protein–coupled receptor on plasmalemmal surface of pancreatic, 130:579
Acrosomal process, of *Limulus* sperm, sequence and domain organization of scruin, actin-cross-linking protein, 128:51
Acrosome reaction, regulatory mechanisms of, revealed by multiview microscopy of starfish sperm, 131:963
Acrosomes, inositol 1,4,5-trisphosphate receptors selectively localized to, mammalian sperm, 130:857
Actin
  alteration of filament assembly of, inhibition of CapZ during myofibrillogenesis, 128:61
  anillin cycles from nucleus to cell cortex, contractile ring protein, 131:165
  binding with spectrin, mechanochemistry of protein 4.1, ternary complex interactions, membrane binding, network integration, structural strengthening, 130:897
  bundles of in *Drosophila* bristles, F actin, two filament cross-links involved in bundling, 130:629
  CapG overexpression on agonist-induced motility and second messenger generation, 129:147
  -capping domain of chicken cardiac tensin, molecular cloning, expression, and mapping, 128:1095
CDC42 and Rac1 control different processes dependent on, *Drosophila* wing disc epithelium, 131:151
–cross-linking protein in acrosomal process, sequence and domain organization of scruin, *Limulus* sperm, 128:51
c-Src regulates rearrangement of actin cytoskeleton, p190RhoGAP, and p120RasGAP following epidermal growth factor stimulation, 130:355
dephosphorylated synapsin I anchors synaptic vesicles to, cytoskeleton, videomicroscopy, 128:905
Dictyostelium myosin I double mutants exhibit conditional defects in pinocytosis, 131:1205
disassembly of, final trigger for exocytosis, nonexcitable cells, 128:589
dominant negative effect of cytoplasmic isoproteins of, cardiomyocyte cytoarchitecture and function, 131:1759
filament organization in fish keratocyte lamellipodium, 129:1275
filaments in yeast are unstable in absence of capping protein and fimbrin, 131:1483
interactions of p85α with focal adhesion kinase and, integrin-dependent translocation of phosphoinositide 3-kinase to cytoskeleton of thrombin-activated platelets, 129:831
morphogenesis and role of myosin II filament assemblies in formation of actin filament bundles, active lamella of fibroblasts, 131:989
myosin is involved in postmitotic cell spreading, 131:179
polymerization of, intracellular solvent flow in cell surface blebbing, 129:1589
polymerization of, myosin light chain kinase-regulated endothelial cell contraction, isometric tension, myosin phosphorylation, 130:613
posttranslational modification of β-, slow dissociation of spectrin-protein 4.1-actin complex, sickled cells, 128:805
regulation in cortical cytoskeleton assembly, polarized cell growth, budding yeast, 128:599
α_{sk}, regulation of muscle-specific transgene by retinoic acid, 129:1345
role of caldesmon in reorganization of filaments of, induced by glucocorticoids, 131:1223
α-smooth muscle, NH_2-terminal sequence Ac-EEED, polymerization in vitro and in vivo, 130:887
a talin homologue of *Dictyostelium* assembles at leading edge in response to chemoattractant, 129:179
three-dimensional organization in *Dictyostelium* pseudopods, genetic deletion of ABP-120, 128:819
Actin-based movement of Listeria monocytogenes, actin assembly results from local maintenance of uncapped filament barbed ends at bacterium surface, 130:331
Actin-dependent mitochondrial motility in mitotic yeast and cell-free systems, motor activity on mitochondrial surface, 130:345
Actin-related proteins, Arp2 and Arp3, *Acanthamoeba*, sequences, structural models, and cellular localization, 131:385
α-Actinin
  cytoplasmic domain of L-selectin interacts with cytoskeletal proteins via, receptor positioning in microvilli does not require interaction with α-actinin, 129:1155
  interaction with cadherin/catenin adhesion complex, α-catenin, 130:67
Activin, osteogenic protein-1 binds to type II receptors of, induction of activin-like effects, 130:217
Acute promyelocytic leukemia, targeting of adenovirus E1A and E4-ORF3 proteins to nuclear matrix–associated PML bodies, 131:45
ADAMs, a disintegrin and metalloprotease domain, novel family of membrane proteins, cell–cell and cell–matrix interactions, 131:275
Adaptins, targeting signals and subunit interactions in coated vesicle adaptor complexes, 131:619
Adenoviruses
  different behavior of rhinovirus serotype 2 and, virus-mediated release of endosomal content in vitro, 131:111
  targeting of E1A and E4-ORF3 proteins of nuclear matrix–associated PML bodies, 131:45
Adenylyl cyclase
  activation in *Dictyostelium*, MAP kinase, 128:405
  chemoattractant and GTPγS-mediated stimulation of, *Dictyostelium*, translocation of CRAC to membranes, 129:1659
Adherens-type junctions, Schwann cell architecture stabilized by, E-cadherin–mediated adhesion in peripheral nerve, 129:189
Adhesion
  affected by lack of β1 integrin gene, embryonic stem cells, morphology, migration, integration into blastocysts, 128:979
  assembly of integrin adhesion complexes requires extracellular matrix and intracellular rho/rac GTPases, 131:1857
  association of p120 with E-cadherin/catenin complexes, tyrosine kinase substrate, 128:949
  of cadherin, modulation of expression, plasticity in epithelial cell phenotype, 129:507
  cadherin-binding specificities of B-cadherin and LCAM, 129:1379
  cell–cell and cell–matrix interactions, ADAM, novel family of membrane proteins containing a disintegrin and metalloprotease domain, 131:275
  chemokines regulate cellular polarization and adhesion receptor redistribution during lymphocyte interaction with endothelium and extracellular matrix, involvement of cAMP signaling pathway, 131:495
  complex of cadherin/catenin, interaction with α-actinin, α-catenin, 130:67

episialin overexpression inhibits integrin-mediated, extracellular matrix components, 129:255
ezrin NH_2-terminal domain inhibits cell extension, COOH-terminal domain, 128:1081
functional analysis of posttranslational cleavage products of neuron–glia cell adhesion molecule, 130:733
functional domains of tenascin-R polypeptide, cell attachment site, binding with Fll, Fll-mediated neurite outgrowth by tenascin-R, 130:473
heparin is adhesive ligand for leukocyte integrin Mac-1, CD11b/CD18, 130:1473
heparin-binding epidermal growth factor-like growth factor and diphtheria toxin receptor–associated protein (DRAP27)/CD9 form complex with integrin $\alpha3\beta1$ at cell–cell contact sites, 129:1691
human E48 antigen is GPI-anchored molecule involved in, keratinocyte cell–cell adhesion, highly homologous to murine Ly-6 antigen ThB, 129:1677
inhibition of cadherin-mediated, interaction of N-acetylgalactosaminylphosphotransferase with endogenous proteoglycan ligand, retina cell surface, 129:1391
integrin VLA-4 supports tethering and rolling in flow on VCAM-1, 128:1243
intracellular domain of desmoglein 3 confers, pemphigus vulgaris antigen, E-cadherin, catenins, 128:939
L1 adhesion molecule is cellular ligand for VLA-5, 131:1881
of leukocytes to endothelium, CD31/PECAM-1 is ligand for $\alpha_v\beta_3$ integrin, 130:451
mediated by E-cadherin, peripheral nerve, Schwann cell architecture stabilized by autotypic adherens junctions, 129:189
$\alpha_4\beta_6$-mediated, recombinant tail-less integrin β_4 subunit disrupts hemidesmosomes, laminins, 129:473
member of L1 family of cell adhesion molecules, E587 glycoprotein participates in axonal fasciculation and age-related order of ganglion cell axons in goldfish retina, 130:969
a peptide derived from intercellular adhesion molecule-2 regulates avidity of leukocyte integrins CD11b/CD18 and CD11c/CD18, 129:1143
protein zero is nervous system adhesion molecule, triggers epithelial reversion in host carcinoma cells, 131:465
of Ras-transformed breast epithelia, tyrosine phosphorylation, 130:461
role for phosphatidylinositol 3-kinase in regulation of $\beta1$ integrin activity by CD2 antigen, 131:1867
role of cadherin in, mouse intestinal epithelium, maintenance of differentiation, regulation of programmed cell death, 129:489
role of CD31 in, mapping homotypic binding sites in CD31, formation of interendothelial cell contacts, 128:1229
of substratum in epithelial cells expressing GlcNAc-transferase V, reduced contact-inhibition, 130:383
v-src kinase shifts cadherin-based cell adhesion from strong to weak state, β catenin not required for shift, 131:1839
Adhesion regulated programmed cell death, in intestinal epithelial cells induced by three-dimensional growth conditions, suppression by mutant c-H-*ras* oncogene expression, 131:1587
Adhesion-dependent calcium signaling, lymphocytes, human endothelial cells, 128:969
Adipoblasts, conversion of immortalized mesodermal progenitor cell towards, osteogenic or chondrogenic pathways, 130:1461
Adipocytes, molecular regulation of GLUT-4 targeting in, 3T3-L1 adipocytes, 130:1081
Adipose cells, expression and compartmentalization of caveolin in, coordinate regulation with and structural segregation from GLUT4, 129:999
α-Agglutinin
cross-linking with $\beta1,6$-glucan, glycosyl phosphatidylinositol, *Saccharomyces cerevisiae* cell wall, 128:333
six complementation classes involved in biosynthesis of glycosylphosphatidylinositol anchors in *Saccharomyces cerevisiae*, 130:1333
Agrin
acetylcholine receptor-aggregating activity of, mapping of active site, 128:625
amino-terminal extension required for secretion of, chick, binding to extracellular matrix, 131:1547
induces protein tyrosine phosphorylation, immobilization of nicotinic acetylcholine receptors in mouse C2 myotubes, 131:441
Agrin-activated protein tyrosine kinase, interaction of nicotinic acetylocholine receptors with cytoskeleton, 128:1121
Alanine/glyoxylate aminotransferase 1, is imported into peroxisomes via PTS1 translocation pathway, peroxisome-to-mitochondrion mistargeting of AGT in primary hyperoxaluria type 1, 131:95
Alphavirus, oligomerization reaction of Semliki Forest virus membrane protein subunits, 128:283
Alphavirus-induced apoptotic pathway, requires activation of transcription factor NF-kappa B, thiol agents and Bcl-2, 131:1149
Alzheimer's disease
polarized sorting is regulated by two independent signals, β-amyloid precursor protein, proteolytic products in MDCK cells, 128:537
trafficking of cell surface β-amyloid precursor protein, retrograde and transcytotic transport in cultured neurons, 129:431
Aminopeptidase I
in vitro reconstitution of cytoplasm to vacuole protein targeting in yeast, 131:1727
isolation of yeast mutants in cytoplasm to vacuole protein targeting pathway, 131:591
Amino-terminal domain, distinct and interdependent functions of, carboxy-terminal domain, molecular dissection of radixin, 129:1007
Amino-terminal extension, required for secretion of chick agrin and its binding to extracellular matrix, 131:1547
Amino-terminal projection domain, interaction of tau with neural plasma membrane mediated by tau's, 131:1327
Amyloid precursor protein, inhibits neurite outgrowth in vitro, downregulation, 128:919
β-Amyloid precursor protein
polarized sorting of, proteolytic products in MDCK cells, independent signals, 128:537
trafficking of, retrograde and transcytotic transport in cultured neurons, 129:431
and transforming growth factor-α share a secretory mechanism, 128:433
Anaphase
checkpoint delays, chromosome monoorientation is mediated by inhibitory signal produced by unattached kinetochores, 130:941
chromosome segregation in, *Saccharomyces cerevisiae*, kinesin- and dynein-related proteins, 128:617
microinjection of mitotic cells with 3F3/2 anti-phosphoepitope antibody delays onset of, 129:1195
two microtubule-associated proteins required for spindle movement during, *Saccharomyces cerevisiae*, 130:1373
Anaphase–metaphase transition, kinetochore microtubule dynamics, 131:721
Angiogenesis
endothelial receptor tyrosine kinases involved in, 129:895
fibrin II induces epithelial cell capillary tube formation, 130:207
Anillin
cycles from nucleus to cell cortex, contractile ring protein, 131:165
fly division, 131:
Ankyrin, neuron-specific isoform of brain ankyrin is targeted to axons of rat cerebellar neurons, 131:1821
Ankyrin-related proteins, necessary of proper axonal guidance in *Caenorhabditis elegans*, 129:1081
Ankyrins, *Ank3* is widely distributed new member of ankyrin gene family and major ankyrin in kidney, alternatively spliced forms, forms that lack repeat domain, 130:313
Annexin, is implicated in vesicular traffic to apical plasma membrane, epithelial specific, 128:1043
Annulate lamellae, nuclear pore complex assembly studied with biochemical assay for formation of, 129:1459
Anterograde motor, KIF2 is microtubule-based, transport of membranous organelles, kinesin heavy chain or KIF3A/B, 129:157
Antibodies, to CD44 and their influence on hyaluronan recognition, 130:485
Anucleate primary sterigmata mutants, of *Aspergillus nidulans*, coiled-coil protein, nuclear positioning, asexual development, 128:485
AP-1, glucocorticoid and progesterone inhibit involution and programmed cell death in mouse mammary gland, 131:1095
AP-2, tyrosine kinase substrate eps15 is constitutively associated with plasma membrane adaptor AP-2, 131:1831
Apical plasma membrane, vesicular traffic to, annexin XIIIb is an epithelial specific annexin, 128:1043
Apoptosis
activation of in mammary epithelial cells, p53, survival function of EGF and insulin, 128:1185
bcl-2 overexpression inhibits, promotion of morphogenesis but not tumorigenesis of human mammary epithelial cells, 129:1363
calcineurin functions in Ca^{2+}-activated cell death in mammalian cells, 131:735
caused by growth factor deprivation via Bcl-2 suppressible mechanism, R-Ras, 129:1103
cells differentiating into neuroectoderm undergo, absence of functional retinoblastoma family proteins, 129:779
dexamethasone-induced, thymocytes, alterations in mitochondrial structure and function, 130:157

glucocorticoid and progesterone inhibit involution and programmed cell death in mouse mammary gland, 131:1095
in intestinal epithelial cells induced by three-dimensional growth conditions, suppression by mutant c-H-*ras* oncogene expression, 131:1587
of lens epithelial cells, non-congenital cataract development in humans and animals, 130:169
osteogenic differentiation of hypertrophic chondrocytes involves asymmetric cell divisions and, 131:483
thiol agents and Bcl-2 identify alphavirus-induced, requires activation of transcription factor NF-kappa B, 131:1149
ARF GTP binding proteins, overexpression of wild-type and mutant ARF1 and ARF6, nonoverlapping membrane compartments, 128:1003
Arginine 89, transgenic mice expressing a keratin 18 conserved arginine mutant, chronic hepatitis, hepatocyte fragility, increased soluble phosphoglycokeratins, 131:1303
Armadillo repeat domain, of β-catenin, embryonic axis induction, intracellular signaling, 128:959
Articulins, major epiplasmic proteins of ciliates are, cloning, recombinant expression, structure, 130:1401
ASE1 gene, two microtubule-associated proteins required for anaphase spindle movement in *Saccharomyces cerevisiae*, 130:1373
Asexual development, coiled-coil protein required for, *Aspergillus nidulans* anucleate primary sterigmata, nuclear positioning, 128:485
Asialoglycoprotein receptor subunit H1, mutations in cytoplasmic domain of, *trans*-Golgi retention of plasma membrane protein, 130:285
Aspergillus nidulans
anucleate primary sterigmata of, coiled-coil protein, nuclear positioning, asexual development, 128:485
myoA of encodes an essential myosin I, secretion, polarized growth, 128:577
AST1 gene, prevents mislocalization of mutant ATPase, targeting of yeast plasma membrane [H$^+$]ATPase, vacuole, 128:39
ATP transport, Saclp mediates, yeast endoplasmic reticulum, required for protein translocation, 131:1377
ATP-binding motif, point mutation of, generated rigor kinesin that selectively blocks anterograde lysosome membrane transport, 131:1039
Autoantigen, a human epidermal, bullous pemphigoid antigen/BP180, identification of sequences within BP180 molecule, interaction between BP180 and α6 integrin, 130:117
Autocrine motility factor receptor, is marker for distinct membranous tubular organelle, 129:459
Axial budding
patterns of bud-site selection in *Saccharomyces cerevisiae*, 129:751
role of Bud3p in producing, yeast, 129:767
Axis induction, by Armadillo repeat domain of β-catenin, intracellular signaling, 128:959
Axis orientation, cell contacts orient some cell division axes in *Caenorhabditis elegans* embryo, 129:1071
Axon, rbSEC1A and B colocalize with syntaxin 1 and SNAP-25 in, 129:105
Axon elongation, role of microtubule dynamics in, growth cone motility, 128:139
Axonal guidance, ankyrin-related gene is necessary for, *unc-44*, *Caenorhabditis elegans*, 129:1081
Axonal transport, KIF2 is new microtubule-based anterograde motor, transport of membranous organelles, kinesin heavy chain or KIF3A/B, 129:157
Axonin-1, binding between Nr-CAM/Bravo and, neural cell adhesion molecules, neuron–glia interaction, 131:1067
Axons
E587 glycoprotein participates in age-related order of ganglion cell axons in goldfish retina and fasciculation of, L1 family of cell adhesion molecules, 130:969
increasing neurofilament-M expression reduces NF-H of, inhibits radial growth, results in neurofilamentous accumulation in motor neurons, 130:1413
interactions with Schwann cells regulated by transforming growth factor-β1, 129:443
neuron-specific isoform of brain ankyrin is targeted to, rat cerebellar neurons, 440-kD ankyrinB, 131:1821
synthesis of phosphatidylcholine is required for normal growth of, rat sympathetic neurons, 128:913
transport of mitochondria in, microtubules and f-actin in vertebrate neurons, 131:1315
B cell leukemia/lymphoma-2, overexpression of inhibits cell death and promotes morphogenesis, but not tumorigenesis of human mammary epithelial cells, 129:1363
ban genes, new genes in fission yeast cell morphogenesis and their role during cell cycle, 131:1529
Basal cells, of keratin network of stratified squamous epithelia, defining K15 function in absence of K14, 129:1329
Basement membranes
differential expression of collagen genes of, COL4A6, COL4A5, immunofluorescence staining using monoclonal antibodies, 130:1219
high affinity immunoreactive FGF receptors in extracellular matrix of vascular endothelial cells, modulation of FGF-2, 128:1221
Basic fibroblast growth factor, differential modulation of cell phenotype by molecular weight forms of, intracellular signaling by high molecular weight forms, 129:233
B-cadherin, cadherin-binding specificities of LCAM and, 129:1379
B-cell lymphoma-2, R-Ras promotes apoptosis caused by growth factor deprivation via, suppressible mechanism, 129:1103
Bcl-2
intracellular distribution and pattern of expression overlaps with those of Mcl-1, 128:1173
and thiol agents identify alphavirus-induced apoptotic pathway that requires activation of transcription factor NF-kappa B, 131:1149
bent locus, of Drosophila, projectin contains functional kinase domains, synchronous and asynchronous muscle isoforms, 128:393
BetaG-Spectrin, disrupts epithelial cell morphology, functional domains, 128:1069
Bile flow, expression of epidermal keratin protein in liver of transgenic mice, structural and functional abnormalities, 128:157
BiP
and Sec63p interaction required for protein translocation into ER of *Saccharomyces cerevisiae*, 131:1163
as sequential molecular chaperone, calnexin, thyroglobulin folding in endoplasmic reticulum, 128:29
serves with Kar2p as molecular chaperone, carboxypeptidase Y folding in yeast, 130:41
Bipartite domains, visualization of, nuclear spreads, ribosomal RNA, 128:15
Bipolar budding, patterns of bud-site selection in *Saccharomyces cerevisiae*, 129:751
4,5-*bis*phosphate–sensitive casein kinase Iα associates with synaptic vesicles, 130:711
Bladder, pp60$^{c\text{-}src}$ is positive regulator of growth factor-induced cell scattering in carcinoma cell line in, rat, 131:761
Blastocysts, lack of β1 integrin gene does not affect integration into, embryonic stem cells, morphology, adhesion, migration, 128:979
Blastoderm, 95F unconventional myosin is required for proper organization of, *Drosophila* syncytial blastoderm, 129:1575
Blebs, actin polymerization and intracellular solvent flow in, 129:1589
BM28, is displaced from chromatin during DNA replication, human member of MCM2-3-5 family, 129:1433
Bone, role for latent transforming growth factor-β binding protein in storage of latent TGF-β in extracellular matrix and as structural matrix protein, 131:539
Bone marrow, E-cadherin is involved in maturation of erythroid lineage, 131:243
Bone morphogenetic protein-7, osteogenic protein-1 binds to activin type II receptors, induction of activin-like effects, 130:217
Botulinum neurotoxins, SNAP-25 is expressed in Islets of Langerhans, insulin release, 128:1019
Brain
DNA-binding protein from, mouse, stimulates transcription of myelin basic protein gene in oligodendrocytic cells, 130:1171
K-glypican is GPI-anchored heparan sulfate proteoglycan that is highly expressed in developing kidney and, 130:1207
ryanodine receptor/calcium channel genes are expressed in, peripheral tissues, 128:893
Brain-derived neurotrophic factor, mediates tissue-specific, axotomy-, and neuronal activity–induced expression, identification of promoter regions, transgenic mice, 128:185
Branching morphogenesis, perturbation of, antibodies against domain E3 of laminin-1 and integrin α6 subunit, submandibular gland, 129:521
Breast, tyrosine phosphorylation regulates adhesions of Ras-transformed epithelia in, 130:461
Brefeldin A-treated rat mammary tumor cells, gap junction turnover, intracellular trafficking, and phosphorylation of connexin43, 131:1193
Bristles, F actin bundles in, *Drosophila*, two filament cross-links involved in bundling, 130:629

Bud growth, NAP1 protein acts with Clb2 to perform mitotic functions and to suppress, budding yeast, 130:675
Budding
Aspergillus nidulans anucleate primary sterigmata, coiled-coil protein, nuclear positioning, asexual development, 128:485
cortical actin cytoskeleton assembly, polarized cell growth in yeast, 128:599
envelope glycoprotein interactions in coronavirus assembly, 131:339
Saccharomyces cerevisiae cells execute default pathway to select mate in absence of pheromone gradients, 131:845
Bud3p, role in producing axial budding pattern in yeast, 129:767
Bud-site selection
role of Bud3p in producing axial budding pattern in yeast, 129:767
in *Saccharomyces cerevisiae*, 129:751
Bullous pemphigoid antigen/BP180, human epidermal autoantigen, identification of sequences within BP180 molecule, interaction between BP180 and $\alpha 6$ integrin, 130:117
BY-2 cells, cytokinesis in tobacco root tip cells and, cell plate formation in higher plants, 130:1345
C1 cells, conversion of immortalized mesodermal progenitor cell towards osteogenic, chondrogenic, or adipogenic pathways, 130:1461
Ca^{2+} release-activated Ca^{2+} channels, physiological roles of, T cell mutants with defects in capacitative calcium entry, 131:655
Caenorhabditis elegans
ankyrin-related gene is necessary for proper axonal guidance in, *unc-44*, 129:1081
cell biological perspective on genome research, 131:1361
cell contacts orient some cell division axes in embryos of, 129:1071
characterization of βpat-3 heterodimers in, integrin receptors, 129:1127
Cadherin-based cell adhesion, β catenin not required for shift from strong to weak state, v-src kinase, 131:1839
Cadherin-binding specificities of B-cadherin and LCAM, 129:1379
Cadherin-catenin complex, p120, p120-related protein, 130:369
Cadherin-mediated adhesion
inhibition, interaction of N-acetylgalactosaminylphosphotransferase with endogenous proteoglycan ligand, retina cell surface, 129:1391
in peripheral nerve, E-cadherin, Schwann cell architecture stabilized by autotypic adherens junctions, 129:189
Cadherins
adhesion complex with catenin, interaction with α-actinin, α-catenin, 130:67
association of plakoglobin, β-catenin, and α-catenin with, vascular endothelial cadherin, molecular organization of endothelial cell to cell junctions, 129:203
function in mouse intestinal epithelium, roles of adhesion, maintenance of differentiation, regulation of programmed cell death, 129:489
modulation of expression by, cell adhesion molecules, plasticity in epithelial cell phenotype, 129:507
receptor protein tyrosine phosphatase PTPμ associates with catenins and, in vivo, 130:977
Calcineurin, functions in Ca^{2+}-activated cell death in mammalian cells, 131:735
Calcitonin gene-related peptide, promotes Schwann cell proliferation, 129:789
Calcium
calcineurin functions in Ca^{2+}-activated cell death in mammalian cells, 131:735
continual assembly of half-desmosomal structures in absence of cell contacts and their frustrated endocytosis, coordinated sisyphus cycle, 131:745
depletion from lumen of endoplasmic reticulum, inhibition of passive diffusion and transport into nucleus, 128:5
elevation of cytosolic free, associated with cytokinesis in zebrafish embryo, 131:1539
inositol 1,4,5-trisphosphate receptors selectively localized to acrosomes of mammalian sperm, 130:857
manganese supports yeast cell-cycle progression in place of, 131:1025
overexpression of calreticulin increases capacity of, rapidly exchanging Ca^{2+} stores, lumenal microenvironment, 130:847
regulates exocytosis required for cell membrane resealing, 131:1747
regulatory mechanisms of acrosome reaction revealed by multiview microscopy of starfish sperm, 131:963
selectively suppresses IL-1–induced NO production, intracellular Ca^{2+}, reducing iNOS mRNA stability, 129:1651
sensitivity from indirect association of ezrin with F-actin, isoform specificity, 128:837
signaling in human endothelial cells, lymphocyte adhesion, 128:969
stimulation of neurite outgrowth in PC12 cells by EGF and KCl depolarization is independent of, 130:701
synergistic role of phosphotyrosine and intracellular concentration of, detachment of cultured cells from substratum induced by neutrophil-derived oxidant NH_2Cl, 131:509
T cell mutants with defects in entry of capacitative, physiological roles of CRAC channels, 131:655
Calcium binding protein
Cdc31p-binding protein Karlp, half-bridge of yeast spindle pole body, 128:863
expressed in subset of peripheral leech neurons, calsensin, single axon tract, 129:1355
Calcium channel genes, expressed in murine brain and peripheral tissues, ryanodine receptors, 128:893
Calcium mobilization, trypanosome-soluble factor induces intracellular, IP_3 formation, microfilament rearrangement in host cells, 129:1263
Calcium signaling
bidirectional receptor-oriented form of, Ca^{2+} waves in PC12 neurites, 129:797
exogenous glycosyl phosphatidylinositol–anchored CD59 associates with kinases in membrane clusters on U937 cells and becomes competent in, 131:669
Caldesmon, essential role of in actin filament reorganization induced by glucocorticoids, 131:1223
Calmodulin, effects on priming and targeting of regulated exocytosis, α-SNAP, 14-3-3 proteins, 130:1063
Calmodulin-dependent protein kinase II, dephosphorylated synapsin I anchors synaptic vesicles to actin cytoskeleton, videomicroscopy, 128:905
Calnexin, as sequential molecular chaperone, BiP, thyroglobulin folding in endoplasmic reticulum, 128:29
Calpain I, sensitivity from indirect association of ezrin with F-actin, isoform specificity, 128:837
Calreticulin
constitutive expression of in osteoblasts inhibits mineralization, 131:1351
overexpression of, increases Ca^{2+} capacity of rapidly exchanging Ca^{2+} stores, lumenal microenvironment, 130:847
Calsensin, expressed in subset of peripheral leech neurons fasciculating in single axon tract, novel calcium-binding protein, 129:1355
Calsequestrin, differential localization and role of, growing and differentiated myoblasts, 128:341
CaM kinase II, differential targeting of protein kinase C and, signalings to vimentin, 131:1055
cAMP
involvement of signaling pathway of, chemokines regulate cellular polarization and adhesion receptor redistribution during lymphocyte interaction with endothelium and extracellular matrix, 131:495
MAP kinase, activation of adenylyl cyclase in *Dictyostelium*, 128:405
phospholipase D in signal transduction pathway of, activated during fibroblast contraction of collagen matrices, 130:1197
Canalicular membrane, expression of *MRP* gene-encoded conjugate export pump in liver and its absence from, transport-deficient mutant hepatocytes, 131:137
CapG, effects of overexpression of, agonist-induced motility and second messenger generation, 129:147
Capillary tubes, formation of induced by fibrin II, endothelial cells, 130:207
Capping protein, actin filaments in yeast are unstable in absence of fimbrin and, 131:1483
CapZ, inhibition of, myofibrillogenesis, alteration of assembly of actin filaments, 128:61
Carboxyl-terminal tail domain, two distinct functions of, NF-M, neurofilament assembly, cross-bridge formation and longitudinal elongation of filaments, 129:411
Carboxypeptidase Y
folding of in yeast, BiP/Kar2p serves as molecular chaperone, 130:41
VPS27 controls vacuolar and endocytic traffic through prevacuolar compartment in *Saccharomyces cerevisiae*, 131:603
Carboxy-terminal domain, distinct and interdependent functions of, amino-terminal domain, molecular dissection of radixin, 129:1007
Carcinoma cells
pp60$^{c\text{-}src}$ is positive regulator of growth factor-induced cell scattering in, rat bladder, 131:761
protein zero triggers epithelial reversion in, nervous system adhesion molecule, 131:465
Cardiac muscle
high affinity actin-capping domain of chicken tensin in, molecular cloning, expression, and mapping, 128:1095
molecular architecture of membranes involved in excitation–contraction coupling of, 129:659
myosin light chain 3F regulatory sequences confer expression in, skeletal muscle, transgenic mice, 129:383

Cardiac myocytes, thin filament assembly in embryonic chick, tropomodulin requires tropomyosin for assembly, 129:683
Cardiomyocytes, dominant negative effect of cytoplasmic actin isoproteins on cytoarchitecture and function of, 131:1759
Cartilage, transglutaminase-catalyzed matrix cross-linking in, osteonectin as major glutaminyl substrate, 129:881
β-Casein gene, laminin mediates tissue-specific gene expression in mammary epithelia, 129:591
α-Casein kinase I, associates with synaptic vesicles and phosphorylates subset of vesicle proteins, phosphatidylinositol 4,5-*bis*phosphate, 130:711
Cataract, development of non-congenital in humans and animals, lens epithelial cell apoptosis, 130:169
Catenin-cadherin complex, p120, p120-related protein, 130:369
Catenins
  Armadillo repeat domain of β-, embryonic axis induction, intracellular signaling, 128:959
  associated with plakoglobin, molecular organization of endothelial cell to cell junctions, β-catenin, α-catenin, vascular endothelial cadherin, 129:203
  α-catenin, interaction of α-actinin with cadherin/catenin adhesion complex via, 130:67
  β catenin, v-src kinase shifts cadherin-based cell adhesion from strong to weak state, β catenin not required for shift, 131:1839
  complex with E-cadherin, p120, tyrosine kinase substrate, 128:949
  desmoglein 3 does not bind, pemphigus vulgaris antigen, adhesive function on extracellular domain of E-cadherin, 128:939
  receptor protein tyrosine phosphatase PTPμ associates with cadherins and, in vivo, 130:977
Cathepsin G, cell surface–bound elastase and, human, non-oxidative mechanism by which neutrophils focus and preserve catalytic activity of serine proteinases, 131:775
Cation-dependent mannose 6-phosphate receptor, determinant in cytoplasmic tail of, prevents trafficking to lysosomes, 130:1297
Caveolae
  caveolin cycles between Golgi complex and plasma membrane, microtubule-dependent and microtubule-independent steps, 131:1421
  hormonal regulation of internalization of, 131:929
  isolation of phosphooligosaccharide/phosphoinositol glycan from cytosol and, insulin-stimulated cells, 131:125
  urokinase-type plasminogen activator receptor localized in, GPI-linked protein, 129:335
Caveolin
  cycles between plasma membrane caveolae and Golgi complex by microtubule-dependent and microtubule-independent steps, 131:1421
  expression and compartmentalization of, adipose cells, coordinate regulation with and structural segregation from GLUT4, 129:999
  glycolipid-anchored proteins in neuroblastoma cells form detergent-resistant complexes without, 129:619
  insulin stimulates tyrosine phosphorylation of, 129:1523
CD2, role for phosphatidylinositol 3-kinase in regulation of β1 integrin activity by antigen of, 131:1867
CD9/DRAP 27, potentiates juxtacrine growth factor activity, heparin-binding EGF-like growth factor, 128:929
CD31, mapping homotypic binding sites in, role in adhesion in interendothelial cell contacts, 128:1229
CD31/PECAM-1, is ligand for $\alpha_v\beta_3$ integrin involved in adhesion of leukocytes to endothelium, 130:451
CD34, sialomucin CD34 is major L-selectin ligand in human tonsil high endothelial venules, 131:261
CD44
  binding to hyaluronan by glycosylation of variably spliced exons, 131:1623
  monoclonal antibodies to, hyaluronan recognition, 130:485
  targeted disruption of, MDAY-D2 lymphosarcoma cells has no effect on subcutaneous growth or metastatic capacity, 131:1849
CD44 isoforms
  alternatively spliced variants containing v3 exon, proteoglycan forms of lymphocyte homing receptor, 128:673
  responsible for presentation of heparin-forming growth factor, exon V3, 128:687
CD59, exogenous glycosyl phosphatidylinositol–anchored CD59 associates with kinases in membrane clusters on U937 cells and becomes Ca^{2+}-signaling competent, 131:669
cdc4$^+$ gene, encodes novel EF-hand protein essential for cytokinesis, *Schizosaccharomyces pombe*, 130:651
CDC20 gene, *Drosophila* cell cycle gene *fizzy* has homology to, *Saccharomyces cerevisiae*, normal degradation of cyclins A and B during mitosis, 129:725
Cdc28, cell cycle checkpoint monitors cell morphogenesis in budding yeast, 129:739
Cdc31p-binding protein Kar1p, half-bridge of yeast spindle pole body, 128:863
CDC42, and Rac1 control different actin-dependent processes, *Drosophila* wing disc epithelium, 131:151
Cdc42 protein, cortical actin cytoskeleton assembly, polarized cell growth in yeast, 128:599
Cdk2, early events in DNA replication require cyclin E and blocked by $p21^{Cip1}$, 130:755
cdk2 kinase, regulates DNA synthesis, Cip1, licensing factor, 129:1
Cell cleavage, delay in HeLa cells, interphase, dihydrocytochalasin B, postmitotic spindle and telophase disc correlate with synchronous cleavage recovery, 131:191
Cell cycle
  CENP-F assembles onto kinetochores at late G2 and is rapidly degraded after mitosis, protein of nuclear matrix, 130:507
  checkpoint delaying anaphase in response to chromosome monoorientation is mediated by inhibitory signal produced by unattached kinetochores, 130:941
  human keratin 18 phosphorylation, polarized distribution of phosphorylated keratins in epithelial tissues, 131:1291
  kinetochore chemistry is sensitive to tension and may link mitotic forces to checkpoint of, 130:929
  manganese supports progression of, yeast, in place of calcium, 131:1025
  members of NAP/SET family of proteins interact with B-type cyclins, 130:661
  molecular marker for centriole maturation in, mammalian, 130:919
  NAP1 protein acts with Clb2 to perform mitotic functions and to suppress polar bud growth in budding yeast, 130:675
  new genes in fission yeast cell morphogenesis and their role during, 131:1529
Cell cycle arrest, prolonged induction of $p21^{Cip1/WAF1}$/CDK2/PCNA complex by epidermal growth factor receptor activation mediates ligand-induced A431 cell growth inhibition, 131:235
Cell cycle progression, differential methylation and altered conformation of cytoplasmic and nuclear forms of protein phosphatase 2A during, 129:397
Cell cycle regulation
  dissociation of centrosome replication events from cycles of DNA synthesis and mitotic division, hydroxyurea-arrested Chinese hamster ovary cells, 130:105
  of dynein in budding yeast, spindle dynamics, 130:687
  of protein phosphatase 2A, microtubules, 128:1131
Cell cycle–dependent localization of CPI90 centrosomal protein, coordinate action of two separable domains, 131:1261
Cell cycle–dependent phosphorylation, binding of E-MAP-115 to microtubules, 131:1015
Cell death, calcineurin functions in Ca^{2+}-activated, mammalian cells, 131:735
Cell differentiation, expression of *mad* gene during, inhibition of cell growth in vitro, 128:1197
Cell division
  cell contacts orient axes of, *Caenorhabditis elegans* embryo, 129:1071
  gated by circadian clock, *Chlamydomonas reinhardtii*, 129:1061
  osteogenic differentiation of hypertrophic chondrocytes involves apoptosis and asymmetric, 131:483
Cell extension, ezrin NH_2-terminal domain inhibits, COOH-terminal domain, 128:1081
Cell fusion, Fus2 localizes near site of, required for cell fusion and nuclear alignment during zygote formation, 130:1283
Cell morphogenesis, cell cycle checkpoint monitors, budding yeast, 129:739
Cell motility
  hepatocyte growth factor/scatter factor modulates proliferation, proteoglycan synthesis of chondrocytes and, 129:1411
  of sarcoma S180 cells in vitro and in embryonic environment, fibronectin-specific integrin expression pattern, 128:699
Cell plate formation, new model of in higher plants, cytokinesis in tobacco BY-2 and root tip cells, 130:1345
Cell proliferation, pendulin is required for, *Drosophila* protein with cell cycle-dependent nuclear localization, 129:1491
Cell scattering, $pp60^{c\text{-}src}$ is positive regulator of growth factor-induced, rat bladder carcinoma cell line, 131:761
Cell size regulation, a mechanism that controls cellular RNA accumulation, transcription factors Oct1 and NF-Y, liver-enriched transcription factor DBP, 128:467
Cell surface
  expression, of receptor protein tyrosine phosphatase RPTPμ is regulated by cell–cell contact, 131:251

regulation of β1 integrin levels in, keratinocyte terminal differentiation, 128:1209
transport, parallel secretory pathways to cell surface in yeast, 131:297
Cells, CI, conversion of immortalized mesodermal progenitor cell towards osteogenic, chondrogenic, or adipogenic pathways, 130:1461
Cellubrevin, similar subcellular localization and biochemical properties with synaptobrevins, PC12 cells, 129:219
Cellular phenotypes, differential modulation of, molecular weight forms of basic fibroblast growth factor, intracellular signaling by high molecular weight forms, 129:233
Cellular transformation, reduced contact-inhibition and substratum adhesion in epithelial cells expressing GlcNAc-transferase V, 130:383
Cenexin, molecular marker for centriole maturation in mammalian cell cycle, 130:919
CENP-E, inhibition of microtubule depolymerization-dependent motion by antibodies to, kinesin motor domain, chromosomes, 128:107
Central nervous system injury, induction of nestin contributes to generation of glial scar tissue after, 131:453
Central spindle, *Drosophila* kinesin-like protein KLP3A is midbody component required for assembly of, initiation of cytokinesis, 129:709
Centriole, molecular marker for maturation of, mammalian cell cycle, 130:919
Centromere, *CEP3* encodes a protein in, *Saccharomyces cerevisiae*, 128:749
Centromere protein-F, assembles onto kinetochores at late G2 and is degraded after mitosis, protein of nuclear matrix, 130:507
Centromeres
kinesin-related protein that associates with, identification of mitotic centromere-associated kinesin, mitosis, 128:95
structure of chromatin in, *Schizosaccharomyces pombe*, novel *cis*-acting centromeric DNA element, 128:445
Centrosomes
cell cycle–dependent localization of CP190 centrosomal protein is determined by coordinate action of two separable domains, 131:1261
impact spindle assembly in living cells, chromosomes, 129:1287
mutations in *twinstar* result in defects in cytokinesis and migration of, *Drosophila* gene encoding a cofilin/ADF homologue, 131:1243
three-dimensional structural characterization of, early *Drosophila* embryos, 130:1149
γ-tubulin is minus end-specific microtubule binding protein, 131:207
Centrosome replication, dissociation of from cycles of DNA synthesis, hydroxyurea-arrested Chinese hamster ovary cells, 130:105
CEP3 gene, encodes centromere protein, *Saccharomyces cerevisiae*, 128:749
Cerebellar cells, neuron-specific isoform of brain ankyrin is targeted to axons of rat cerebellar neurons, 440-kD ankyring, 131:1821
Cervical cells, keratinocyte growth factor is bifunctional regulator of HPV16 DNA-immortalized epithelial, 129:843
Chaperone
BiP/Kar2p serves as, carboxypeptidase Y folding in yeast, 130:41
calnexin and BiP act as, thyroglobulin folding in endoplasmic reticulum, 128:29
Checkpoint controls
microinjection of mitotic cells with 3F3/2 anti-phosphoepitope antibody delays onset of anaphase, 129:1195
monitor cell morphogenesis in budding yeast, 129:739
nuclear envelope breakdown is under nuclear not cytoplasmic control in sea urchin zygotes, 129:1447
Chemoattractants
G protein β subunit is essential for multiple responses to, *Dictyostelium*, 129:1667
stimulation of adenylyl cyclase in *Dictyostelium* requires translocation of CRAC to membranes, GTPγS-mediated stimulation, 129:1659
Chemokines, regulate cellular polarization and adhesion receptor redistribution during lymphocyte interaction with endothelium and extracellular matrix, involvement of cAMP signaling pathway, 131:495
Chemotaxis
chemotactic response to PDGF-BB, role for Ras, 130:725
density-sensing factor regulates signal transduction in *Dictyostelium*, 129:1251
ponticillin plays role in positional stabilization of pseudopods, 131:1495
sphingosine-1-phosphate inhibits PDGF-induced, human arterial smooth muscle cells, modulation of PDGF chemotactic signal transduction, 130:193
surface attachment of *Salmonella typhimurium* to intestinal epithelia imprints subepithelial matrix with gradients chemotactic for neutrophils, 131:1599
a talin homologue of *Dictyostelium* assembles at leading edge in response to chemoattractant, 129:179
Chemotropism, *Saccharomyces cerevisiae* cells execute default pathway to select mate in absence of pheromone gradients, 131:845
Chick, amino-terminal extension required for secretion of agrin in, binding to extracellular matrix, 131:1547
Chicken
acetylcholine receptor-aggregating activity of agrin isoforms, mapping of active site, 128:625
ARIA is concentrated in synaptic basal lamina of developing neuromuscular junction in, 130:1423
cardiac tensin of, molecular cloning, expression, and mapping, high affinity actin-capping domain, 128:1095
molecular cloning of β-tectorin in, extracellular matrix molecule of inner ear, 129:535
peripheral expression of GDNF, new neurotrophic factor for avian and mammalian peripheral neurons, 130:137
thin filament assembly in embryonic cardiac myocytes of, tropomodulin requires tropomyosin for assembly, 129:683
transglutaminase in myofibril assembly of embryonic myoblasts in, in culture, 130:1127
Chinese hamster
ovary cell mutant of, non-endocytic uptake of fluorescent analogs of phosphatidylserine, cytosol acidification protocol, 128:793
ovary cells in hydroxyurea-arrested, dissociation of centrosome replication events from cycles of DNA synthesis, 130:105
transforming growth factor-α, β-amyloid precursor protein, secretory mechanism, 128:433
Chironomus tentans, structural interaction between nuclear pore complex and specific translocating RNP particle, 129:1205
Chlamydomonas
kinesin-like protein FLA10 involved in motility associated with flagellar membrane, 131:1517
78,000 M_r intermediate chain of, outer arm dynein, WD-repeat protein required for arm assembly, 129:169
78,000-M_r intermediate chain of outer arm dynein of, microtubule-binding protein, 131:399
Chlamydomonas reinhardtii
cell division cycle gated by circadian clock in, 129:1061
mutational analysis of phototransduction pathway of, 131:427
Chloroplast receptor, enzymatic product formation impairs binding function of, translocation competence of NADPH: protochlorophyllide oxidoreductase, plastid precursor protein, 129:299
CHO2 antigen, characterization of minus end–directed kinesin-like motor protein from cultured mammalian cells, 129: 1049
CHO cells
dual pathways of internalization of cholecystokinin receptor, 128:1029
identification of mitotic centromere-associated kinesin, kinesin-related protein associates with centromeres during mitosis, 128:95
mutation in glyceraldehyde 3-phosphate dehydrogenase alters endocytosis in, 130:1093
Cholecystokinin receptor
dual pathways of internalization of, 128:1029
insulation of G-protein–coupled receptor on plasmalemmal surface of pancreatic acinar cell, 130:579
Cholera toxin, targeting of, *Escherichia coli* heat labile toxin in polarized epithelia, role of COOH-terminal KDEL, 131:951
Cholesterol
depletion and modification by, COOH-terminal targeting sequence of prion protein, inhibition of scrapie isoform, 129:121
sequestration of, acetylated LDL, human monocyte-derived macrophages, 129:133
Chondroblasts, conversion of immortalized mesodermal progenitor cell towards, osteogenic or adipogenic pathways, 130:1461
Chondrocytes
hepatocyte growth factor/scatter factor modulates cell motility, proliferation, and proteoglycan synthesis of, 129:1411
increased intracellular Ca^{2+} selectively suppresses IL-1–induced NO production by reducing iNOS mRNA stability, 129:1651
osteogenic differentiation of hypertrophic, involves asymmetric cell divisions and apoptosis, 131:483
type X collagen gene expression in, mouse, immortalization by temperature-sensitive simian virus 40 large tumor antigen, 128:239

Chondrodysplasia, caused by human COL2A1-directed SV40 T antigen expression, transgenic and chimeric mice, 128:223
Chromatids, core separation step in formation of metaphase chromosomes, postprophase topoisomerase II, 131:7
Chromatin
binding site of, tail domain of nuclear lamins that interacts with core histones, 131:33
BM28 is displaced from, human member of MCM2-3-5 family, DNA replication, 129:1433
centromere structure in, *Schizosaccharomyces pombe*, novel *cis*-acting centromeric DNA element, 128:445
conformation of, salt-induced compaction, three-dimensional structural information from cryoelectron microscopy, 131:1365
organization of in mega–base pair–sized loops arranged along random walk path in human G0/G1 interphase nucleus, 130:1239
Chromokinesin, a DNA-binding, kinesin-like nuclear protein, 128:761
Chromosome bands, three-dimensional structural dissection of *Drosophila* polytene chromosomes, 131:279
Chromosome folding, organization of chromatin in mega–base pair–sized loops arranged along random walk path in human G0/G1 interphase nucleus, 130:1239
Chromosome localization, identification of domain of, *Drosophila* nod kinesin-like protein, 131:833
Chromosome monoorientation, checkpoint delaying anaphase in response to, mediated by inhibitory signal produced by unattached kinetochores, 130:941
Chromosome motion, inhibition of in vitro, antibodies to kinesin motor domain and CENP-E, inhibition of microtubule depolymerization-dependent motion, 128:107
Chromosome movement
chromokinesin, a DNA-binding, kinesin-like nuclear protein, 128:761
motor proteins as couplers, depolymerizing microtubules, 128:1
Chromosome segregation, kinesin- and dynein-related proteins required for, anaphase, *Saccharomyces cerevisiae*, 128:617
Chromosomes, impact on spindle assembly in living cells, centrosomes, 129:1287
Ciliates, major epiplasmic proteins of, articulins, cloning, recombinant expression, structure, 130:1401
Cipl, regulates DNA synthesis, cdk2, licensing factor, 129:1
Circadian rhythm, gates cell division cycle, *Chlamydomonas reinhardtii*, 129:1061
cis-Golgi, targeting of protein ERGIC-53 to ER/ERGIC/*cis*-Golgi recycling pathway, 131:57
cis-Golgi network, characterization of a *cis*-Golgi matrix protein, GM130, 131:1715
Clathrin, targeting signals and subunit interactions in coated vesicle adaptor complexes, 131:619
Clathrin-independent pinocytosis, induced in cells overexpressing temperature-sensitive mutant of dynamin, 131:69
Coated pits
of MDCK cells differ in rates of maturation into coated vesicles, apical and basolateral pits, mutant hemagglutinin proteins with different internalization signals, 129:1241
recruitment of epidermal growth factor receptors into, activated tyrosine kinase, 129:47
Coated vesicle adaptor complexes, targeting signals and subunit interactions in, 131:619
Cofilin/ADF homologue, *Drosophila* gene encodes, mutations in *twinstar* result in defects in centrosome migration and cytokinesis, 131:1243
Coiled bodies, mutational analysis of p80 coilin indicates functional interaction between nucleolus and, 131:817
COL2A1 gene, -directed SV40 T antigen expression, transgenic and chimeric mice, abnormal skeletal development, 128:223
Collagen
and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by $\alpha 1\beta 1$ and $\alpha 2\beta 1$ integrins, 131:1903
phospholipase D in cAMP signal transduction pathway activated during fibroblast contraction of matrices of, 130:1197
Collagen genes, differential expression of two, COL4A6, COL4A5, basement membrane, demonstrated by immunofluorescence staining using monoclonal antibodies, 130:1219
Collagen type I, impairs tissue remodeling in mice, targeted mutation at collagenase cleavage site, 130:227
Collagen VII, procollagen VII is processed to, removal of NC-2 domain, 131:551
Collagen XII, large and small splice variants of, differential expression and ligand binding, 130:1005
Collagenase
cleavage site of, targeted mutation, mouse type I collagen impairs tissue remodeling, 130:227
nuclear signaling cascade regulates gene expression of, integrin-derived signals, 129:1707
Collagenase gene, expression of in three-dimensional collagen lattices are differentially regulated by $\alpha 1\beta 1$ and $\alpha 2\beta 1$ integrins, 131:1903
Con A, myosin I from rat localizes to structures inducible by, SH3 domain, cell–cell contacts, 129:819
Conditioned medium factor, regulates signal transduction in *Dictyostelium discoideum*, density-sensing factor, 129:1251
Conjugate export pump, expression of *MRP* gene-encoded, liver, absence from canalicular membrane in transport-deficient mutant hepatocytes, 131:137
Connexin43, gap junction turnover, intracellular trafficking, and phosphorylation of, Brefeldin A-treated rat mammary tumor cells, 131:1193
Connexin 43/β-galactosidase fusion protein inhibits gap junctional communication in NIH3T3 cells, 130:419
Connexin-mediated coupling, required for proper insulin production, 131:1561
Connexins, transfected connexin45 alters gap junction permeability in cells expressing endogenous connexin43, 130:987
Connexin-transfected HeLa cells, specific permeability and selective formation of gap junction channels, 129:805
Contractile ring protein, cycles from nucleus to cell cortex, anillin, 131:165
COOH terminus, characterization of minus end–directed kinesin-like motor protein from cultured mammalian cells, 129:1049
COOH-terminal tail, insulin-sensitive targeting of GLUT4 glucose transporter in L6 myoblasts is conferred by, 129:641
α-COP, Golgi-localization of yeast Emp47p depends on di-lysine motif but not affected by *ret1-1* mutation in, 131:895
Cop I and Cop II, sequential coupling between CopII and CopI vesicle coats in endoplasmic reticulum to Golgi transport, 131:875
COP I-independent pathway, in mitotic fragmentation of Golgi stacks, tubular networks, 130:1027
Coronaviruses, envelope glycoprotein interactions in assembly of, 131:339
Cortical cells, downregulation of amyloid precursor protein, inhibition of neurite outgrowth in vitro, 128:919
Coupling, adequate connexin-mediated coupling required for proper insulin production, 131:1561
CP190, cell cycle–dependent localization of, centrosomal protein, coordinate action of two separable domains, 131:1261
CRAC, translocation of CRAC to membranes, chemoattractant and GTPγS-mediated stimulation of adenylyl cyclase in *Dictyostelium*, 129:1659
Cross-bridges, formation of, longitudinal elongation of filaments, two functions of carboxyl-terminal tail domain of NF-M upon assembly of neurofilament assembly, 129:411
Cryoelectron microscopy, three-dimensional structural information from, chromatin conformation and salt-induced compaction, 131:1365
c-Src, regulates rearrangement of actin cytoskeleton, p190RhoGAP, and p120RasGAP following epidermal growth factor stimulation, 130:355
Cyclin
B, interaction with microtubule-associated protein 4, targets $P34^{CDC2}$ kinase, M-phase microtubule dynamics, 128:849
Clb2, acts with NAP1 protein to perform mitotic functions and to suppress polar bud growth in budding yeast, 130:675
E, DNA replication requires, blocked by $p21^{CIP1}$, 130:755
members of NAP/SET family of proteins interact with B-type, 130:661
truncated form of Pho80, redirects Pho85 kinase to disrupt vacuole inheritance in *Saccharomyces cerevisiae*, 130:835
Cyclin-dependent kinase
inhibition of, triggers differentiation of mouse neuroblastoma cells, 131:227
prolonged induction of $p21^{Cip1/WAF1}$/CDK2/PCNA complex by epidermal growth factor receptor activation mediates ligand-induced A431 cell growth inhibition, 131:235
Cyclins
Drosophila cell cycle gene *fizzy* required for normal degradation of, cyclins A and B during mitosis, homology to *CDC20* gene of *Saccharomyces cerevisiae*, 129:725
oocyte activation and passage through metaphase/anaphase transition, clams, inhibitors of HMG-CoA reductase, 128:1145
Cytoarchitecture, dominant negative effect of cytoplasmic actin isoproteins on cardiomyocyte cytoarchitecture and function, 131:1759
Cytokines, neuropoietic expression of, epidermal growth factor promotes neural phenotype in thymic epithelial cells, 130:183

Cytokinesis
controlled by microtubule polarity and dynamics, organelle positioning, segregation, trypanosome cell cycle, 128:1163
Drosophila kinesin-like protein KLP3A is midbody component required for initiation of, central spindle assembly, 129:709
elevation of cytosolic free calcium associated with, zebrafish embryo, 131:1539
fly division, 131:1
forced expression of chimeric human fibroblast tropomyosin mutants affects, 129:697
mutations in *twinstar* result in defects in centrosome migration and, *Drosophila* gene encoding a cofilin/ADF homologue, 131:1243
phragmoplast of green alga *Spirogyra* is functionally distinct from higher plant phragmoplast, 130:1359
Schizosaccharomyces pombe cdc4^{+} gene encodes a novel EF-hand protein essential for, 130:651
in tobacco BY-2 and root tip cells, cell plate formation in higher plants, 130:1345
Cytoplasm, in vitro reconstitution of cytoplasm to vacuole protein targeting in yeast, 131:1727
Cytoplasmic domain
focal adhesion kinase and paxillin bind to peptides mimicking β integrin, 130:1181
interacts with cytoskeletal proteins via α-actinin, receptor positioning in microvilli does not require interaction with α-actinin, 129:1155
mutations in, asialoglycoprotein receptor subunit H1, *trans*-Golgi retention of plasma membrane protein, 130:285
targeting of protein ERGIC-53 to ER/ERGIC/*cis*-Golgi recycling pathway, 131:57
Cytoplasmic tail
of cation-dependent mannose 6-phosphate receptor prevents trafficking to lysosomes, 130:1297
β_3-endonexin interacts with, novel polypeptide, integrin β_3 subunit, 131:807
of integrin β_3, necessary and sufficient for regulation of $\alpha_5\beta_1$ phagocytosis by $\alpha_v\beta_3$ and integrin-associated protein, 130:745
lysosomal targeting signal in, β chain, directs HLA-DM to MHC class II compartments, 131:351
NPXY motif required in integrin β3 subunit of, melanoma cell migration in vitro and in vivo, 130:441
Cytoskeletal proteins, cytoplasmic domain of L-selectin interacts with, receptor positioning in microvilli does not require interaction with α-actinin, 129:1155
Cytoskeleton
controls gene expression, depolymerization of microtubules activates NF-κB, 128:1111
integrin-dependent translocation of phosphoinositide 3-kinase to, thrombin-activated platelets, interactions of p85α with actin filaments and focal adhesion kinase, 129:831
interaction with nicotinic acetylocholine receptors, agrin-activated protein tyrosine kinase, 128:1121
molecular hierarchies of cytoskeletal and signaling molecules, integrin function, 131:791
rearrangements of during entry of *Shigella flexneri* into HeLa cells, functional role of T-plastin, 129:367
Cytosol
acidification protocol of, Chinese hamster ovary cell mutant, non-endocytic uptake of fluorescent analogs of phosphatidylserine, 128:793
isolation of phosphooligosaccharide/phosphoinositol glycan from caveolae and, insulin-stimulated cells, 131:125
Defender against apoptotic cell death, *OST2* gene encodes 16-kD subunit of yeast oligosaccharyltransferase, highly conserved protein expressed in diverse eukaryotic organisms, 131:371
Dendrites, transport of microtubules of, establishes nonuniform polarity orientation, 130:93
Depolymerization, rigidity of microtubules is increased by stabilizing agents, 130:909
Desensitization, dual pathways of internalization of cholecystokinin receptor, 128:1029
Desmogleins, confers adhesive function on extracellular domain of E-cadherin, pemphigus vulgaris antigen, catenins, 128:939
Desmosomes, continual assembly of half-desmosomal structures in absence of cell contacts and their frustrated endocytosis, coordinated sisyphus cycle, 131:745
Detergent-resistant complexes, glycolipid-anchored proteins in neuroblastoma cells form, caveolin, 129:619
Detyrosination, of microtubules, localize vimentin intermediate filaments to fibroblasts, 131:1275
Dexamethasone-induced thymocyte apoptosis, alterations in mitochondrial structure and function, 130:157
Diaphragm muscle, developmental regulation of membrane traffic organization during synaptogenesis in, mouse, 130:959
Dictyostelium
actin filaments in pseudopods of, genetic deletion of ABP-120, 128:819
chemoattractant and GTPγS-mediated stimulation of adenylyl cyclase in, translocation of CRAC to membranes, 129:1659
expression of light meromyosin in, blocks normal myosin II function, 130:605
G protein β subunit is essential for multiple responses to chemoattractants in, 129:1667
myosin I double mutants in, conditional defects in pinocytosis, 131:1205
ponticillin plays role in positional stabilization of pseudopods, 131:1495
Dictyostelium discoideum
activation of adenylyl cyclase in, MAP kinase, 128:405
density-sensing factor regulates signal transduction in, 129:1251
a talin homologue of, assembly at leading edge in response to chemoattractant, 129:179
Diffusion, of transferrin receptor in plasma membrane, barriers for lateral diffusion, receptor dragging by laser tweezers, fence versus tether, 129:1559
Dihydrocytochalasin B, delay of HeLa cell cleavage into interphase using, postmitotic spindle and telophase disc correlate with synchronous cleavage recovery, 131:191
Dihydropyridine receptors, molecular architecture of membranes involved in excitation–contraction coupling of cardiac muscle, 129:659
Dilysine signals, steric masking of in endoplasmic reticulum, retention motif, assembly of human high affinity receptor for immunoglobulin E, 129:971
Diphtheria toxin receptor–associated protein, and heparin-binding epidermal growth factor-like growth factor form complex with integrin $\alpha3\beta1$ at cell–cell contact sites, DRAP27/CD9, 129:1691
Disintegrin domain, metalloprotease domain, novel family of membrane proteins, ADAM, cell–cell and cell–matrix interactions, 131:275
DNA binding protein, chromokinesin, kinesin-like nuclear protein, 128:761
DNA elements
affect centromeric chromatin structure at a distance, *Schizosaccharomyces pombe*, 128:445
of mouse pro-α1(I) collagen promoter direct expression of reporter genes, *cis*-acting, different type I collagen-producing cells in transgenic mice, 129:1421
DNA replication
BM28 is displaced from chromatin during, human member of MCM2-3-5 family, 129:1433
early events in, cyclin E required, blocked by p21^{CIP1}, 130:755
telomerase RNA localized in replication band and subnuclear organelles in hypotrichous ciliates, 130:243
DNA synthesis, regulation of, cdk2, Cip1, licensing factor, 129:1
DnaJ homologue, can function in endoplasmic reticulum with BiP/Kar2p, yeast, Scj1p, conserved domain that specifies interactions with Hsp70s, 129:979
DNM1 gene, participates in endosomal trafficking in yeast, dynamin-related gene, 130:553
Dog, annexin XIIIb is an epithelial specific annexin, vesicular traffic to apical plasma membrane, 128:1043
Dragging, by laser tweezers, fence versus tether, barriers for lateral diffusion of transferrin receptor in plasma membrane, 129:1559
Drosophila, bent locus product of, projectin contains functional kinase domains, synchronous and asynchronous muscle isoforms, 128:393
Drosophila
anillin cycles from nucleus to cell cortex, contractile ring protein, 131:165
cell biological perspective on genome research, 131:1361
cell cycle gene *fizzy* of, normal degradation of cyclins A and B during mitosis, homology to *CDC20* gene of *Saccharomyces cerevisiae*, 129:725
development requires spectrin network formation, 128:71
F actin bundles in bristles of, two filament cross-links involved in bundling, 130:629
95F unconventional myosin is required for proper organization of syncytial blastoderm of, 129:1575
fly division, 131:1
identification of chromosome localization domain of nod kinesin-like protein of, 131:833
kinesin-like protein in, midbody component required for central spindle assembly and initiation of cytokinesis, 129:709
overgrown hematopoietic organs-31 tumor suppressor gene of, *importin*-like protein accumulates in nucleus at onset of mitosis, 129:1473

protein with cell cycle-dependent nuclear localization in, pendulin is required for normal cell proliferation, 129:1491
regulation of cytoplasmic dynein function in vivo by glued complex in, 131:411
three-dimensional structural characterization of centrosomes from early embryos of, 130:1149
wing disc epithelium of, CDC42 and Rac1 control different actin-dependent processes, 131:151
Drosophila melanogaster
cell cycle–dependent localization of CP190 centrosomal protein is determined by coordinate action of two separable domains, 131:1261
gene encoding a cofilin/ADF homologue in, mutations in *twinstar* result in defects in centrosome migration and cytokinesis, 131:1243
three-dimensional structural dissection of polytene chromosomes of, 131:279
Duchenne muscular dystrophy
mechanical function of dystrophin, muscle cells, 128:355
syntrophin binds to dystrophin, alternatively spliced exon, 128:363
syntrophin binds to dystrophin, mammalian α1- and β1-syntrophin, alternative splice-prone region, COOH terminus, 128:373
Dyadic proteins, immunolocalization of sarcolemmal dihydropyridine receptor and sarcoplasmic reticular triadin and ryanodine receptor in rabbit ventricle and atrium, 129:673
Dynactin
cytoplasmic dynein binds, interaction between intermediate chains and p150^{Glued}, 131:1507
regulation of cytoplasmic dynein function in vivo by *Drosophila* glued complex, 131:411
Dynamin, temperature-sensitive mutant of, clathrin-independent pinocytosis is induced in cells, 131:69
Dynamin-related gene, participates in endosomal trafficking in yeast, *DNM1*, 130:553
Dynein
antibodies to kinesin motor domain and CENP-E, inhibition of microtubule depolymerization-dependent motion of chromosomes, 128:107
binds dynactin through direct interaction between intermediate chains and p150^{Glued}, 131:1507
cell cycle regulation of, spindle dynamics, budding yeast, 130:687
drives formation of endoplasmic reticulum networks in vitro, protein phosphatase 1, 128:879
78,000-M_r intermediate chain of, *Chlamydomonas* outer arm, microtubule-binding protein, 131:399
regulation of cytoplasmic, in vivo, *Drosophila* glued complex, 131:411
α-Dystroglycan
distribution of during embryonic nerve–muscle synaptogenesis, 129:1093
involved in epithelial development, non-muscle, 130:79
Dystrophin
mechanical function of, muscle cells, 128:355
successful histocompatible myoblast transplantation in dystrophin-deficient mdx mouse despite production of antibodies against, 131:975
syntrophin binds to, alternatively spliced exon, 128:363
syntrophin binds to, mammalian α1- and β1-syntrophin, alternative splice-prone region, COOH terminus, 128:373
E48 antigen, is GPI-anchored molecule involved in keratinocyte cell–cell adhesion, highly homologous to murine Ly-6 antigen ThB, 129:1677
E587 antigen, participates in axonal fasciculation and age-related order of ganglion cell axons in goldfish retina, L1 family of cell adhesion molecules, 130:969
E1B19K protein, protects sympathetic neurons from cell death, p35, NGF deprivation, 128:201
E-cadherin
adhesive function on extracellular domain of, desmoglein 3, pemphigus vulgaris antigen, catenins, 128:939
complex with catenin, p120, tyrosine kinase substrate, 128:949
is involved in maturation of erythroid lineage, 131:243
EF-hand protein, *Schizosaccharomyces pombe cdc4*$^{+}$ gene encodes, essential for cytokinesis, 130:651
EGF, survival in mammary epithelial cells, p53, apoptosis, insulin, 128:1185
Egg envelopes, dissociate dimers, monomer is active species, crystal structure of abalone sperm lysin dimer, 130:1117
Eggs
membrane retrieval into large vesicles after exocytosis in, sea urchin, 131:1183
membrane/microtubule tip attachment complexes allow assembly dynamics of plus ends to push and pull membranes into tubulovesicular networks in interphase extracts of, *Xenopus*, 130:1161
Elastase, cell surface–bound cathepsin G and, human, non-oxidative mechanism by which neutrophils focus and preserve catalytic activity of serine proteinases, 131:775
E-MAP-115, binding of to microtubules, regulated by cell cycle–dependent phosphorylation, 131:1015
Embryo, elevation of cytosolic free calcium associated with cytokinesis in, zebrafish, 131:1539
Embryogenesis
developmental expression of fibrillin genes suggests heterogeneity of extracellular microfibrils, 129:1165
migratory behavior of sarcoma S180 cells in, fibronectin-specific integrin expression pattern, 128:699
myogenin is required for late but not early myogenesis, mouse development, 128:563
targeted mutation at collagenase cleavage site, mouse type I collagen impairs tissue remodeling, 130:227
Embryonic stem cells, lack of β1 integrin gene in, morphology, adhesion, migration, integration into blastocysts, 128:979
Embryos, three-dimensional structural characterization of centrosomes from, *Drosophila*, 130:1149
Emp47p, Golgi-localization of, yeast, depends on di-lysine motif but not affected by *ret1-1* mutation in α-COP, 131:895
EMS cell, cell contacts orient some cell division axes in *Caenorhabditis elegans* embryo, 129:1071
Endocytic recycling compartment, oligomerized transferrin receptors are selectively retained by lumenal sorting signal in, 129:1509
Endocytosis
clathrin-independent pinocytosis induced in cells overexpressing temperature-sensitive mutant of dynamin, 131:69
continual assembly of half-desmosomal structures in absence of cell contacts and their frustrated, coordinated sisyphus cycle, 131:745
cytoplasmic determinants in, lysosomal sorting, targeting of rat lgp120 (lamp-1) in MDCK cells, 128:321
DNM1 participates in endosomal trafficking in yeast, dynamin-related gene, 130:553
endocytic depletion of L-MAG from CNS myelin in quaking mice, 131:1811
exocytotic fusion pore of small granules has conductance similar to ion channel, 129:99
of interleukin 2 receptors in human T lymphocytes, intracellular localization and fate of receptor α, β, and γ chains, 129:55
and intracellular sorting in alveolar macrophages, "synchronized" endocytosis, early sorting endosome is transient organelle, 129:1229
involvement of GTP binding protein Rho in, *Xenopus laevis* oocytes, 130:1319
low density lipoprotein receptor–related protein as an endocytic receptor for thrombospondin-1, 129:1403
molecular size–fractionation during, macrophages, 129:989
mutation in glyceraldehyde 3-phosphate dehydrogenase alters, CHO cells, 130:1093
Rab7 is important regulator of membrane traffic during late, 131:1435
recruitment of epidermal growth factor receptors into coated pits requires activated tyrosine kinase, 129:47
tyrosine kinase substrate eps15 is constitutively associated with plasma membrane adaptor AP-2, 131:1831
visualizing in yeast, vacuolar membrane dynamics, new vital stain, 128:779
β$_3$-Endonexin, interacts with cytoplasmic tail of integrin β$_3$ subunit, novel polypeptide, 131:807
Endoplasmic reticulum
COOH-terminal sequence motifs target T cell protein tyrosine phosphatase to nucleus and, 131:631
depletion of calcium from, inhibition of passive diffusion and transport into nucleus, 128:5
differential localization and role of calsequestrin, differentiated myoblasts, 128:341
human SEC13Rp is located on transport vesicles budding from, yeast, 128:769
interaction between BiP and Sec63p required for protein translocation into, *Saccharomyces cerevisiae*, 131:1163
microtubule-mediated membrane traffic from Golgi to, kinesin, 128:293
misfolded major histocompatibility complex class I molecules accumulate in expanded ER-Golgi intermediate compartment, 131:1403
nascent chain–Sec61p interactions accompany translocation across membrane of, stage- and ribosome-specific alterations, 129:957
protein phosphatase 1 regulates formation of, cytoplasmic dynein-driven, 128:879
retention of glucose units delays exit of glycoproteins from, UDP-Glc:glycoprotein glucosyltransferase, 130:771

Sac1p mediates adenosine triphosphate transport into, yeast, required for protein translocation, 131:1377
sequential coupling between CopII and CopI vesicle coats in transport from, to Golgi, 131:875
steric masking of dilysine retention motif in, assembly of human high affinity receptor for immunoglobulin E, 129:971
β subunit of signal recognition particle receptor anchors α subunit to membrane of, transmembrane and peripheral membrane GTPases, 128:273
targeting of protein ERGIC-53 to ER/ERGIC/*cis*-Golgi recycling pathway, 131:57
thyroglobulin folding in, calnexin and BiP act as sequential molecular chaperones, 128:29
yeast DnaJ homologue can function in, Scj1p, BiP/Kar2p, conserved domain that specifies interactions with Hsp70s, 129:979
Endoplasmic reticulum membrane, functional characterization of 180-kD ribosome receptor in vivo, 130:29
Endoplasmic reticulum protein
SED4 encodes, yeast, binds Sec16p and participates in vesicle formation, 131:325
transmembrane movement of water-soluble analogue of mannosylphosphoryldolichol is mediated by, 130:529
Endoplastic reticulum, capacity to retrieve proteins of, *trans*-most cisterna of Golgi stack, 129:309
Endosomes
DNM1 participates in trafficking of, dynamin-related gene, yeast, 130:553
early sorting endosome is transient organelle, synchronized endocytosis and intracellular sorting in alveolar macrophages, 129:1229
localization of major histocompatibility complex class II–invariant chain complexes in, multimerization of invariant chain targeting sequence, 129:1217
overexpression of wild-type and mutant ARF1 and ARF6, nonoverlapping membrane compartments, 128:1003
transferrin trafficking in, nonvectorial and retrograde, HEp2 cells, 128:549
transport from, lysosomes, sorting of integral membrane proteins in endosomes, depends on vacuolar proton pump, 130:821
virus-mediated release of content of, in vitro, different behavior of adenovirus and rhinovirus serotype 2, 131:111
Endothelial cells
CD31/PECAM-1 is ligand for $\alpha_v\beta_3$ integrin involved in adhesion of leukocytes to, 130:451
contraction of regulated by myosin light chain kinase, isometric tension, actin polymerization, myosin phosphorylation, 130:613
fibrin II induces, capillary tube formation, 130:207
in human, lymphocyte adhesion-dependent calcium signaling, 128:969
molecular organization of cell to cell junctions, association of plakoglobin, β-catenin, and α-catenin with vascular endothelial cadherin, 129:203
role of CD31 adhesion in formation of interendothelial cell contacts, mapping homotypic binding sites in CD31, 128:1229
Endothelium, receptor tyrosine kinases of, angiogenesis, 129:895
Envelope glycoproteins, interactions in coronavirus assembly, 131:339
Enzymatic activity, expression of, 7B2 protein facilitates maturation of proPC2 in neuroendocrine cells, 129:1641
Epidermal growth factor
c-Src regulates rearrangement of actin cytoskeleton, p190RhoGAP, and p120RasGAP following stimulation by, 130:355
prolonged induction of $p21^{Cip1/WAF1}$/CDK2/PCNA complex by, receptor activation mediates ligand-induced A431 cell growth inhibition, 131:235
promotes neural phenotype in thymic epithelial cells, neuropoietic cytokine expression, 130:183
stimulation of neurite outgrowth in PC12 cells by KCl depolarization and, Ca^{2+}-independent phenomenon, 130:701
Epidermal growth factor receptors
oligomerization of, A431 cells studied by time-resolved fluorescence imaging microscopy, stereochemical model for tyrosine kinase receptor activation, 129:1543
recruitment into coated pits, activated tyrosine kinase, 129:47
Epidermolysis bullosa simplex, basal keratin network of stratified squamous epithelia, defining K15 function in absence of K14, 129:1329
Epiplasm, major proteins of, ciliates, articulins, cloning, recombinant expression, structure, 130:1401
Episialin, overexpression of inhibits integrin-mediated cell adhesion, extracellular matrix components, 129:255
Epithelial ankyrin, *Ank3* is widely distributed new member of ankyrin gene family and major ankyrin in kidney, alternatively spliced forms, forms that lack repeat domain, 130:313
Epithelial cells
annexin XIIIb in, vesicular traffic to apical plasma membrane, 128:1043
apoptosis of in lens, non-congenital cataract development in humans and animals, 130:169
cell surface expression of receptor protein tyrosine phosphatase RPTPμ is regulated by cell–cell contact, 131:251
epidermal growth factor promotes neural phenotype in, thymus, neuropoietic cytokine expression, 130:183
expression of *Notch 1*, *2*, and *3* regulated by interactions of mesenchyme and, retinoic acid, developing mouse tooth, determination of ameloblast cell fate, 130:407
ezrin oligomers are major cytoskeletal components of placental microvilli, cortical morphogenesis, 131:1231
generating Na/K-ATPase polarity in MDCK, 130:1105
hepatocyte growth factor/scatter factor induces variety of tissue-specific morphogenic programs in, 131:1573
identification and characterization of a fibroblast marker, FSP1, 130:393
intracellular routing of wild-type and mutated polymeric immunoglobulin receptor in hippocampal neurons in culture, 130:1447
involvement of pRB family in TGFβ-dependent hypertrophy in, 129:245
programmed cell death in intestinal, induced by three-dimensional growth conditions, suppression by mutant c-H-*ras* oncogene expression, 131:1587
protein zero triggers epithelial reversion in host carcinoma cells, nervous system adhesion molecule, 131:465
reduced contact-inhibition and substratum adhesion in, GlcNAc-transferase V, 130:383
sequential requirement of hepatocyte growth factor and neuregulin, morphogenesis and differentiation of mammary gland, 131:215
surface attachment of *Salmonella typhimurium* to, intestinal cells, imprints subepithelial matrix with gradients chemotactic for neutrophils, 131:1599
targeting of cholera toxin and *Escherichia coli* heat labile toxin in polarized, role of COOH-terminal KDEL, 131:951
transferrin-like GPI-linked iron-binding protein in detergent-insoluble noncaveolar microdomains at apical surface of, fetal intestinal, 131:939
tyrosine phosphorylation regulates adhesions of Ras-transformed, breast, 130:461
Epithelial development, non-muscle α-dystroglycan is involved in, 130:79
Epithelial tissues, polarized distribution of phosphorylated keratins in, human keratin 18 phosphorylation, 131:1291
Epithelium
basal keratin network of, stratified squamous, defining K15 function in absence of K14, 129:1329
bcl-2 overexpression inhibits cell death and promotes morphogenesis but not tumorigenesis of, human mammary cells, 129:1363
cadherin function in mouse intestinal, roles of adhesion, maintenance of differentiation, regulation of programmed cell death, 129:489
of *Drosophila* wing disc, CDC42 and Rac1 control different actin-dependent processes, 131:151
extracellular matrix regulates whey acidic protein gene expression by suppression of TGF-α in, mouse mammary cells, in culture and transgenic mice, 129:1115
keratinocyte growth factor is bifunctional regulator of HPV16 DNA-immortalized cervical cells of, 129:843
laminin mediates tissue-specific gene expression in mammary, 129:591
perturbation of branching morphogenesis of, submandibular gland, antibodies against domain E3 of laminin-1 and integrin α6 subunit, 129:521
plasticity of cell phenotype of, modulation of expression of different cadherin cell adhesion molecules, 129:507
specific receptor detection by functional keratinocyte growth factor–immunoglobulin chimera, 129:357
Epitopes, monoclonal antibodies to CD44 and their influence on hyaluronan recognition, 130:485
eps15, tyrosine kinase substrate eps15 is constitutively associated with plasma membrane adaptor AP-2, 131:1831
ERGIC-53 to ER/ERGIC/*cis*-Golgi recycling pathway, 131:57
ERGIC-53 protein, targeting of, ER/ERGIC/*cis*-Golgi recycling pathway, 131:57
ER–Golgi intermediate compartment, targeting of protein ERK, MAP kinase, activation of adenylyl cyclase in *Dictyostelium*, 128:405

Erythroid cells, E-cadherin is involved in maturation of, 131:243
Escherichia coli, targeting of heat labile toxins in, cholera toxin, polarized epithelia, role of COOH-terminal KDEL, 131:951
Excitation–contraction coupling, molecular architecture of membranes in, cardiac muscle, 129:659
Exocytosis
actin filament disassembly is final trigger for, nonexcitable cells, 128:589
calcium-regulated, required for cell membrane resealing, 131:1747
dephosphorylated synapsin I anchors synaptic vesicles to actin cytoskeleton, videomicroscopy, 128:905
effects of α-SNAP, 14-3-3 proteins, and calmodulin on priming and triggering of, 130:1063
of fusion pore of small granules, conductance similar to ion channel, 129:99
membrane retrieval into large vesicles after, sea urchin eggs, 131:1183
parallel secretory pathways to cell surface in yeast, 131:297
rbSEC1A and B colocalize with syntaxin 1 and SNAP-25 in axon, 129:105
Sec6, Sec8, and Sec15 are components of multisubunit complex which localizes to small bud tips in *Saccharomyces cerevisiae*, 130:299
similar subcellular localization and biochemical properties of cellubrevin and synaptobrevins, PC12 cells, 129:219
at sites of plasma membrane disruption, vesicle accumulation, 131:1737
t-SNAREs syntaxin 1 and SNAP-25 in organelles, synaptic vesicle recycling, 128:637
Exons, CD44 binding to hyaluronan by glycosylation of variably spliced, 131:1623
Exotoxin-mediated selection, *Pseudomonas*, cells with altered expression of low-density lipoprotein receptor–related protein, 129:1533
Extracellular matrix
amino-terminal extension required for secretion of chick agrin and its binding to, 131:1547
ARIA released from, cleavage of a heparin-binding domain, 130:127
assembly of integrin adhesion complexes requires intracellular rho/rac GTPases and, 131:1857
collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by α1β1 and α2β1 integrins, 131:1903
high affinity immunoreactive FGF receptors in, modulation of FGF-2, 128:1221
integrin-mediated cell adhesion to, episialin overexpression, 129:255
regulates whey acidic protein gene expression, suppression of TGF-α in mouse mammary epithelial cells, in culture and transgenic mice, 129:1115
role for latent transforming growth factor-β binding protein in storage of latent TGF-β in, structural matrix protein, 131:539
Extracellular matrix molecule, of inner ear, molecular cloning of chick β-tectorin, 129:535
Extracellular matrix protein, expressed in developing and adult nervous system, thrombospondin-4 promotes neurite outgrowth, 131:1083
Ezrin
indirect association with F-actin, isoform specificity, calcium sensitivity, 128:837
NH_2-terminal domain of inhibits cell extension activity, COOH-terminal domain, 128:1081
oligomers of are major cytoskeletal components of placental microvilli, cortical morphogenesis, 131:1231
3F3/2 anti-phosphoepitope antibody, delays onset of anaphase, microinjection of mitotic cells, 129:1195
95F myosin, is unconventional myosin required for proper organization of *Drosophila* syncytial blastoderm, 129:1575
Fll protein, binding with tenascin-R polypeptide, functional domains of tenascin-R polypeptide, enhancement of Fll-mediated neurite outgrowth by tenascin-R, cell attachment site, 130:473
F-actin
axonal transport of mitochondria along microtubules and, vertebrate neurons, 131:1315
GAP-43 depletion in growth cones, absence of persistent spreading, branching, and adhesion, 128:647
indirect association with ezrin, isoform specificity, calcium sensitivity, 128:837
myosin I from rat localizes to Con A–inducible structures rich in, SH3 domain, cell–cell contacts, 129:819
tropomyosin is essential in yeast, *TPM1* and *TPM2* products, 128:383
FAR1 gene, required for oriented polarization of yeast cells in response to mating pheromones, 131:863
FGF receptors, in extracellular matrix of vascular endothelial cells, high affinity immunoreactive, modulation of FGF-2, 128:1221
Fibrillarin, nuclear spreads, visualization of bipartite rRNA domains, 128:15
Fibrillin genes, developmental expression of, heterogeneity of extracellular microfibrils, 129:1165
Fibrils, large and small splice variants of collagen XII, differential expression and ligand binding, 130:1005
Fibrin II, induces epithelial cell capillary tube formation, 130:207
Fibroblast growth factor-4, antisense oligonucleotides block murine limb development, Hst-1, 130:997
Fibroblast growth factor receptors, specific receptor detection by functional keratinocyte growth factor–immunoglobulin chimera, 129:357
Fibroblasts
cooperative signaling by α5β1 and α4β1 integrins regulates metalloproteinase gene expression in, adhesion to fibronectin, 129:867
detyrosinated microtubules function to localize vimentin intermediate filaments to, 131:1275
myosin II filament assemblies in active lamella of, morphogenesis and role in formation of actin filament bundles, 131:989
phospholipase D in cAMP signal transduction pathway activated during contraction of, collagen matrices, 130:1197
proenkephalin is nuclear protein responsive to growth arrest and differentiation signals, 130:1251
tyrosine phosphorylation and cytoskeletal tension regulate release of fibroblast adhesions, 131:525
Fibroblast-specific protein 1, identification and characterization of, fibroblast marker, 130:393
Fibrogenesis, identification and characterization of a fibroblast marker, FSP1, 130:393
Fibronectin
cooperative signaling by α5β1 and α4β1 integrins regulates metalloproteinase gene expression in fibroblasts adhering to, 129:867
nuclear signaling cascade regulates collagenase gene expression in response to integrin-derived signals, 129:1707
peptide isolated from phage display libraries is mimic of RGD-binding site on integrins, 130:1189
type II, functional domains of tenascin-R polypeptide, cell attachment site, binding with Fll, Fll-mediated neurite outgrowth by tenascin-R, 130:473
Fibronectin-specific integrin expression pattern, migratory behavior of sarcoma S180 cells, in vitro and in embryonic environment, 128:699
Fimbrin, actin filaments in yeast are unstable in absence of capping protein and, 131:1483
Fish, actin filament organization in keratocyte lamellipodium of, 129:1275
Fission yeast, product of spindle formation gene $sadl^+$ associates with spindle pole body in, viability, 129:1033
fizzy gene, of *Drosophila*, cell cycle gene, normal degradation of cyclins A and B during mitosis, homology to *CDC20* gene of *Saccharomyces cerevisiae*, 129:725
FLA10, involved in motility associated with flagellar membrane, kinesin-like protein, 131:1517
Flagella, anatomy of, polarity, seam, junctions, and lattice, 128:81
Flagellar membrane, kinesin-like protein FLA10 involved in motility associated with, 131:1517
Flagellates, major epiplasmic proteins of ciliates are articulins, cloning, recombinant expression, structure, 130:1401
Flagellum, targeting of two glucose transporters from *Leishmania enriettii*, mediated by NH_2-terminal domain, 128:499
Fluorescence imaging microscopy, oligomerization of epidermal growth factor receptors on A431 cells studied by, stereochemical model for tyrosine kinase receptor activation, 129:1543
Focal adhesion kinase
interactions of p85α with actin filaments and, integrin-dependent translocation of phosphoinositide 3-kinase to cytoskeleton of thrombin-activated platelets, 129:831
and paxillin bind to peptides mimicking β integrin cytoplasmic domains, 130:1181
Focal adhesions, tyrosine phosphorylation and cytoskeletal tension regulate release of fibroblast adhesions, 131:525
Forskolin, calcitonin gene-related protein promotes Schwann cell proliferation, 129:789
Fractionation, during endocytosis in macrophages, molecular size, 129:989
Fus2 protein, localizes near site of cell fusion and is required for cell fusion and nuclear alignment during zygote formation, 130:1283
Fusion pore, of small granules has conductance similar to ion channel, exocytosis, 129:99

G protein β subunit, is essential for multiple responses to chemoattractants in *Dictyostelium*, 129:1667
Gaalp, required for attachment of completed GPI anchor onto proteins, yeast, 129:629
β-Galactosidase/connexin 43 fusion protein inhibits gap junctional communication in NIH3T3 cells, 130:419
Galactosylceramide, differential targeting of analogues of glucosylceramide and, after synthesis but not during transcytosis in Madin-Darby canine kidney cells, 131:645
Gap junction channels, selective formation of, permeability, connexin-transfected HeLa cells, 129:805
Gap junctions
adequate connexin-mediated coupling required for proper insulin production, 131:1561
connexin 43/β-galactosidase fusion protein inhibits communication of, NIH3T3 cells, 130:419
transfected connexin45 alters permeability of, cells expressing endogenous connexin43, 130:987
turnover of, intracellular trafficking, and phosphorylation of connexin43 in Brefeldin A-treated rat mammary tumor cells, 131:1193
GAP-43 protein, depletion in growth cones, absence of persistent spreading, branching, and adhesion, 128:647
Gelsolin, CapG overexpression on agonist-induced motility and second messenger generation, 129:147
Gene expression, cytoskeletal control of, depolymerization of microtubules activates NF-κB, 128:1111
Genome research, cell biological perspective on, 131:1361
GLFG domain, reconstituted nuclei depleted of a vertebrate nuclear pore protein, p97, defective in nuclear growth and replication, 128:721
Glial cell line-derived neurotrophic factor, peripheral expression of, new neurotrophic factor for avian and mammalian peripheral neurons, 130:137
Glial scar tissue, induction of nestin contributes to generation of, CNS injury, 131:453
Glia–neuron interaction, binding between neural cell adhesion molecules axonin-1 and Nr-CAM/Bravo, 131:1067
β1,6-Glucan, cross-linking with α-agglutinin, glycosyl phosphatidylinositol, *Saccharomyces cerevisiae* cell wall, 128:333
Glucocorticoids
and progesterone inhibit involution and programmed cell death in mouse mammary gland, 131:1095
role of caldesmon in actin filament reorganization induced by, 131:1223
Glucose, retention of units of, UDP-Glc:glycoprotein glucosyltransferase, exit of glycoproteins from endoplasmic reticulum, 130:771
Glucose transporters
differential targeting of, *Leishmania enriettii*, mediated by NH_2-terminal domain, 128:499
molecular regulation of GLUT-4 targeting in 3T3-L1 adipocytes, 130:1081
signals in GLUT4, internalization, targeting to insulin-responsive compartment, 130:1071
Glucosylceramide, differential targeting of analogues of galactosylceramide and, after synthesis but not during transcytosis in Madin-Darby canine kidney cells, 131:645
Glued complex, regulation of cytoplasmic dynein function in vivo by, *Drosophila*, 131:411
GLUT-4, molecular regulation of targeting of, 3T3-L1 adipocytes, 130:1081
GLUT4
coordinate regulation with and structural segregation from, expression and compartmentalization of caveolin in adipose cells, 129:999
signals in glucose transporter for internalization and for targeting to insulin-responsive compartment, 130:1071
GLUT4 glucose transporter, insulin-sensitive targeting of, L6 myoblasts, COOH-terminal cytoplasmic tail, 129:641
Glutaminyl, osteonectin as major substrate of, transglutaminase-catalyzed matrix cross-linking in differentiating cartilage, 129:881
Glyceraldehyde 3-phosphate dehydrogenase, mutation in alters endocytosis in CHO cells, 130:1093
Glycolipid-anchored proteins, form detergent-resistant complexes without caveolin, neuroblastoma cells, 129:619
Glycophosphatidyl inositol, cholesterol depletion and modification of COOH-terminal targeting sequence of prion protein, inhibition of scrapie isoform, 129:121
Glycophosphatidylinositol-anchored influenza, hemagglutinin induces hemifusion to both red blood cell and planar bilayer membranes, 131:679
Glycoproteins
functional analysis of posttranslational cleavage products of neuron–glia cell adhesion molecule, 130:733
retention of glucose units delays exit of, UDP-Glc:glycoprotein glucosyltransferase, endoplasmic reticulum, 130:771
selective reentry of recycling cell surface, biosynthetic pathway in human hepatocarcinoma HepG2 cells, 130:537
Glycosyl phosphatidylinositol–anchored CD59 associates with kinases in membrane clusters on U937 cells and becomes Ca^{2+}-signaling competent, 131:669
Glycosyl phosphatidylinositol-dependent cross-linking of α agglutinin and β1,6-glucan, *Saccharomyces cerevisiae* cell wall, 128:333
Glycosylation
CD44 binding to hyaluronan by, variably spliced exons, 131:1623
loss of subunit of *Saccharomyces cerevisiae* oligosaccharyltransferase results in biased underglycosylation of acceptor substrates, Ost3p, 130:567
α subunit of oligosaccharyltransferase complex, *Saccharomyces cerevisiae*, vegetative growth, homologous to mammalian ribophorin I, 128:525
Glycosylphosphatidylinositol, six complementation classes involved in biosynthesis of anchors of, *Saccharomyces cerevisiae*, 130:1333
Glycosylphosphatidylinositol-anchored heparan sulfate proteoglycan is highly expressed in developing brain and kidney, K-glypican, 130:1207
Glycosylphosphatidylinositol-anchored molecule involved in keratinocyte cell–cell adhesion, human E48 antigen is highly homologous to murine Ly-6 antigen ThB, 129:1677
Glycosylphosphatidylinositol-linked glycoprotein, is localized in caveolae, urokinase-type plasminogen activator receptor, 129:335
Glycosylphosphatidylinositols, anchored onto proteins, yeast Gaalp is required for attachment, 129:629
GM130, characterization of, *cis*-Golgi matrix protein, 131:1715
Goldfish, E587 glycoprotein participates in axonal fasciculation and age-related order of ganglion cell axons in retina of, L1 family of cell adhesion molecules, 130:969
Golgi
caveolin cycles between plasma membrane caveolae and, microtubule-dependent and microtubule-independent steps, 131:1421
misfolded major histocompatibility complex class I molecules accumulate in expanded ER-Golgi intermediate compartment, 131:1403
sequential coupling between CopII and CopI vesicle coats in transport from endoplasmic reticulum to, 131:875
Golgi apparatus
developmental regulation of membrane traffic organization during synaptogenesis in mouse diaphragm muscle, 130:959
membrane proteins of, vacuolar membrane proteins, *vps1* mutant yeast cells, plasma membrane, 129:35
mitotic fragmentation of, role for tubular networks and a COP I-independent pathway, Golgi stacks, 130:1027
Golgi complex
anterograde and retrograde traffic between rough endoplasmic reticulum and, 131:1387
microtubule-mediated membrane traffic from, kinesin, endoplasmic reticulum, 128:293
Golgi stacks
capacity to retrieve escaped ER proteins extends to *trans*-most cisterna of, 129:309
reassembly of, mitotic Golgi fragments in cell-free system, 129:605
reconstitution of vesiculated Golgi membranes into, cisternae, NSF required in stack formation, 129:577
Golgi-localization of yeast Emp47p depends on di-lysine motif but not affected by *ret1-1* mutation in α-COP, 131:895
Golgin-95, characterization of a *cis*-Golgi matrix protein, GM130, 131:1715
GP75 protein, identification of signals for sorting of, human brown locus protein, intracellular sorting and targeting of melanosomal membrane proteins, 130:807
GPI-linked iron-binding protein, in detergent-insoluble noncaveolar microdomains at apical surface of fetal intestinal epithelial cells, transferrin-like protein, 131:939
G-protein α_s subunit, stimulation of *Xenopus* oocyte maturation by inhibition of, component of plasma membrane and yolk platelet membranes, 130:275
G-protein–coupled receptor, insulation of, plasmalemmal surface of pancreatic acinar cell, 130:579
Grafting, successful histocompatible myoblast transplantation in dystrophin-deficient mdx mouse despite production of antibodies against dystrophin, 131:975
Grasshopper
chromosomes initiate spindle assembly upon dissolution of nuclear envelope in spermatocytes of, 131:1125

impact of chromosomes and centrosomes on spindle assembly in living cells, 129:1287
Green fluorescent protein, MAP4 function in living cells using chimeras of, 130:639
Growth cones
GAP-43 depletion in, absence of persistent spreading, branching, and adhesion, 128:647
motility of, role of microtubule dynamics, axonal growth, 128:139
turning at substrate boundaries of, role of microtubules, 128:127
Growth factor, R-Ras promotes apoptosis caused by deprivation of, Bcl-2 suppressible mechanism, 129:1103
Growth factor-induced cell scattering in rat bladder carcinoma cell line, pp60$^{c\text{-}src}$ is positive regulator, 131:761
Growth inhibition, caused by *mad* gene, cell differentiation in vivo, 128:1197
Growth-associated proteins, depletion in growth cones, absence of persistent spreading, branching, and adhesion, 128:647
GTP binding protein, in constitutive endocytosis in *Xenopus laevis* oocytes, Rho, 130:1319
GTP hydrolysis
by Ran occurs at nuclear pore complex in early step of protein import, 131:571
structural changes accompanying, microtubules, hydrolyzable analogue, guanylyl-(α,β)-methylene-disphosphonate, 128:117
GTPase
assembly of integrin adhesion complexes requires extracellular matrix and intracellular rho/rac GTPases, 131:1857
nucleotide exchange factor required for Ypt1 GTPase mediated protein transport, 130:1051
transmembrane and peripheral membrane GTPases, β subunit of signal recognition particle receptor anchors α subunit to endoplasmic reticulum, 128:273
Ypt1 is essential for first two steps in yeast secretory pathway, 131:583
GTPγS, -mediated stimulation of adenylyl cyclase in *Dictyostelium* requires translocation of CRAC to membranes, chemoattractant, 129:1659
Guanylyl-(α,β)-methylene-disphosphonate, information from, structural changes accompanying GTP hydrolysis in microtubules, hydrolyzable analogue, 128:117
Hansenula polymorpha, *PER8* gene in, peroxisomal integral membrane protein, proliferation, 128:307
Heart, NCAM polypeptides in, association with Z discs, muscle-specific domain, 128:209
Heat labile toxins, targeting of in *Escherichia coli*, cholera toxin, polarized epithelia, role of COOH-terminal KDEL, 131:951
HeLa cells
cytoskeletal rearrangements and functional role of T-plastin during entry of *Shigella flexneri* into, 129:367
specific permeability and selective formation of gap junction channels in connexin-transfected, 129:805
Hemagglutinin, induces hemifusion to both red blood cell and planar bilayer membranes, GPI-anchored influenza, 131:679
Hemagglutinin proteins, apical and basolateral coated pits of MDCK cells, mutant hemagglutinin proteins with different internalization signals, rates of maturation into coated vesicles, 129:1241
Hematopoiesis, many faces of hepatocyte growth factor, hepatopoiesis, 129:1177
Hemidesmosome
a human epidermal autoantigen, bullous pemphigoid antigen/BP180, identification of sequences within BP180 molecule, interaction between BP180 and α6 integrin, 130:117
recombinant tail-less integrin β_4 subunit disrupts, no suppression of $\alpha_6\beta_4$-mediated cell adhesion to laminins, 129:473
Hemifusion, GPI-anchored influenza hemagglutinin induces, red blood cell and planar bilayer membranes, 131:679
HEp2 cells, nonvectorial, retrograde transferrin trafficking in, early endosomes, 128:549
Heparan sulfate proteoglycan, K-glypican is a novel GPI-anchored, highly expressed in developing brain and kidney, 130:1207
Heparin
acetylcholine receptor-aggregating activity of agrin isoforms, mapping of active site, 128:625
is adhesive ligand for leukocyte integrin Mac-1, CD11b/CD18, 130:1473
Heparin sulphate
CD44 isoforms responsible for presentation of heparin-forming growth factor, exon V3, 128:687
proteoglycan forms of lymphocyte homing receptor CD44, alternatively spliced variants containing v3 exon, 128:673
Heparin-binding domain, ARIA released from extracellular matrix through cleavage of, 130:127
Heparin-binding epidermal growth factor-like growth factor, and diphtheria toxin receptor–associated protein (DRAP27)/CD9 form complex with integrin $\alpha3\beta1$ at cell–cell contact sites, 129:1691
Heparin-binding growth factor
CD44 isoforms responsible for, exon V3, 128:687
EGF-like, juxtacrine growth factor activity of, membrane protein CD9/DRAP 27, 128:929
Heparin-binding growth/differentiation factors, regulated by retinoic acid and epithelial–mesenchymal interactions in developing mouse tooth, cell proliferation and morphogenesis, midkine, 129:267
Heparin-extracted nuclear envelopes, isolation and characterization of nuclear envelopes from *Saccharomyces*, 131:19
Hepatitis, in transgenic mice expressing a keratin 18 conserved arginine mutant, hepatocyte fragility, increased soluble phosphoglycokeratins, 131:1303
Hepatocarcinoma HepG2 cells, selective reentry of recycling cell surface glycoproteins to biosynthetic pathway in, human, 130:537
Hepatocyte growth factor
many faces of, hepatopoiesis, hematopoiesis, 129:1177
sequential requirement of neuregulin and, morphogenesis and differentiation of mammary gland, 131:215
Hepatocyte growth factor/scatter factor
induces variety of tissue-specific morphogenic programs in epithelial cells, 131:1573
modulates cell motility, proliferation, and proteoglycan synthesis of chondrocytes, 129:1411
role in early development of metanephros, met receptor, 128:171
Hepatocytes
expression of epidermal keratin protein in liver of transgenic mice, structural and functional abnormalities, 128:157
expression of *MRP* gene-encoded conjugate export pump in liver and its absence from canalicular membrane in transport-deficient mutant, 131:137
fragility of in transgenic mice expressing a keratin 18 conserved arginine mutant, chronic hepatitis, increased soluble phosphoglycokeratins, 131:1303
Hepatopoiesis, many faces of hepatocyte growth factor, hematopoiesis, 129:1177
$\alpha v\beta6$ Heterodimer, transforming growth factor-$\beta1$ modulates $\beta1$ and $\beta5$ integrin receptors and induces expression of, human keratinocytes, implications for wound healing, 129:853
Heterogeneous nuclear RNP A1 protein, nuclear localization domain in, 129:551
High endothelial venules, sialomucin CD34 is major L-selectin ligand in, human tonsil, 131:261
High-affinity growth factor receptor, in extracellular matrix of vascular endothelial cells, modulation of FGF-2, 128:1221
Histones, chromatin binding site in tail domain of nuclear lamins interacts with core, 131:33
HLA-DM, lysosomal targeting signal in cytoplasmic tail of β chain directs, MHC class II compartments, 131:351
HMG-CoA reductase-induced membranes in fission yeast, degradation, *Schizosaccharomyces pombe*, 131:81
HN_2Cl, detachment of cultured cells from substratum induced by neutrophil-derived oxidant NH_2Cl, synergistic role of phosphotyrosine and intracellular Ca^{2+} concentration, 131:509
Homotypic binding, mapping of in CD31, role of CD31 adhesion in formation of interendothelial cell contacts, 128:1229
Hormonal regulation, of caveolae internalization, 131:929
HPV16, keratinocyte growth factor is bifunctional regulator of, cervical epithelial cells, 129:843
Hsp70s, conserved domain that specifies interactions with, yeast DnaJ homologue can function in endoplasmic reticulum with BiP/Kar2p, Scj1p, 129:979
Hst-1, antisense oligonucleotides block murine limb development, FGF-4, 130:997
Human
endothelial cells of, lymphocyte adhesion-dependent calcium signaling, 128:969
Mcl-1 intracellular distribution and pattern of expression overlaps with those of Bcl-2, 128:1173
morphology of epithelial cells in, functional domains of beta$_G$-spectrin, 128:1069
nuclear localization, testis, gene product SRY, 128:737
rolling of neutrophils of, P-selectin glycoprotein ligand-1, 128:661
SEC13Rp functions in yeast, transport vesicles, endoplasmic reticulum, 128:769
Human fibroblasts, forced expression of chimeric, tropomyosin mutants affect cytokinesis, 129:697
Hyaluronan
CD44 binding to, glycosylation of variably spliced exons, 131:1623
monoclonal antibodies to CD44 and their influence on recognition of, 130:485
3-Hydroxy-3-methylglutaryl coenzyme A reductase, oocyte activation and passage is blocked by inhibitors of, metaphase/anaphase transition, clams, 128:1145

Hydroxyurea-arrested Chinese hamster ovary cells, dissociation of centrosome replication events from cycles of DNA synthesis, 130:105
Hypertrophy, involvement of pRB family in TGFβ-dependent, epithelial cells, 129:245
Hypotrichous ciliates, telomerase RNA localized in replication band and subnuclear organelles in, 130:243
Immunoglobulin, chimeric molecule of, specific receptor detection by functional keratinocyte growth factor, 129:357
Immunoglobulin E, assembly of human high affinity receptor for, steric masking for dilysine endoplasmic reticulum retention motif, 129:971
Importin-like protein, accumulates in nucleus at onset of mitosis, *overgrown hematopoietic organs-3l* tumor suppressor gene of *Drosophila*, 129:1473
Influenza, GPI-anchored, hemagglutinin induces hemifusion to both red blood cell and planar bilayer membranes, 131:679
Influenza virus, virus-mediated release of endosomal content in vitro, different behavior of adenovirus and rhinovirus serotype 2, 131:111
Inner ear, extracellular matrix molecule of, molecular cloning of chick β-tectorin, 129:535
Inner nuclear membrane, integral membrane protein targeting to, signals and structural features, 130:15
Inositol 1,4,5-trisphosphate
  receptors selectively localized to acrosomes of mammalian sperm, 130:857
  trypanosome-soluble factor induces formation of, intracellular Ca^{2+} mobilization and microfilament rearrangement in host cells, 129:1263
Insulin
  connexin-mediated coupling required for proper production of, 131:1561
  isolation of phosphooligosaccharide/phosphoinositol glycan from caveolae and cytosol of cells stimulated by, 131:125
  signals in GLUT4 glucose transporter for internalization and targeting to compartment responsive to, 130:1071
  SNAP-25 is involved in release of, Islets of Langerhans, 128:1019
  stimulates tyrosine phosphorylation of caveolin, 129:1523
  survival in mammary epithelial cells, p53, apoptosis, EGF, 128:1185
Insulin-sensitive targeting of GLUT4 glucose transporter in L6 myoblasts, COOH-terminal cytoplasmic tail, 129:641
Integral membrane protein, targeting of to inner nuclear membrane, signals and structural features, 130:15
Integrin β_3 subunit
  β_3-endonexin interacts with cytoplasmic tail of, novel polypeptide, 131:807
  NPXY motif in cytoplasmic tail of, melanoma cell migration in vitro and in vivo, 130:441
Integrin(s)
  $\alpha 3\beta 1$, heparin-binding epidermal growth factor-like growth factor and diphtheria toxin receptor–associated protein (DRAP27)/CD9 form complex with, cell–cell contact sites, 129:1691
  α6, interaction between BP180 and, human epidermal autoantigen, bullous pemphigoid antigen/BP180, identification of sequences within BP180 molecule, 130:117
  $\alpha_v\beta_3$, CD31/PECAM-1 is ligand for, adhesion of leukocytes to endothelium, 130:451
  β, focal adhesion kinase and paxillin bind to peptides mimicking cytoplasmic domains of, 130:1181
  β1, in keratinocyte terminal differentiation, regulation of cell surface levels, 128:1209
  β1, role for phosphatidylinositol 3-kinase in regulation of, CD2 antigen, 131:1867
  β_3, cytoplasmic tail of, necessary and sufficient for regulation of $\alpha_5\beta_1$ phagocytosis by $\alpha_v\beta_3$ and integrin-associated protein, 130:745
  assembly of adhesion complexes of, requires extracellular matrix and intracellular rho/rac GTPases, 131:1857
  CD11b/CD18 and CD11c/CD18, a peptide derived from intercellular adhesion molecule-2 regulates avidity of, leukocytes, 129:1143
  collagen and collagenase gene expression in three-dimensional collagen lattices are differentially regulated by $\alpha 1\beta 1$ and $\alpha 2\beta 1$ integrins, 131:1903
  cooperative signaling by, $\alpha 5\beta 1$ and $\alpha 4\beta 1$ integrins, metalloproteinase gene expression in fibroblasts adhering to fibronectin, 129:867
  expression pattern modifies migratory behavior of sarcoma S180 cells, fibronectin-specific, in vitro and in embryonic environment, 128:699
  function of, molecular hierarchies of cytoskeletal and signaling molecules, 131:791
  heparin is adhesive ligand for Mac-1, CD11b/CD18, leukocyte, 130:1473
  β1 integrin gene, lack of affects morphology, adhesion, and migration, embryonic stem cells, integration into blastocysts, 128:979
  $\alpha_6\beta_4$ integrin-mediated cell adhesion to laminins, recombinant tail-less integrin β_4 subunit disrupts hemidesmosomes, 129:473
  mediate cell adhesion to extracellular matrix components, episialin overexpression, 129:255
  peptide isolated from phage display libraries is mimic of RGD-binding site on, 130:1189
  α6 subunit, antibodies against, domain E3 of laminin-1, perturbation of branching epithelial morphogenesis of submandibular gland, 129:521
  β subunit, in *Caenorhabditis elegans*, characterization of βpat-3 heterodimers, 129:1127
  transforming growth factor-β1 modulates β1 and β5 integrin receptors, expression of $\alpha v\beta 6$ heterodimer in human keratinocytes, implications for wound healing, 129:853
  VLA-4, supports tethering and rolling in flow on VCAM-1, 128:1243
Integrin-associated protein, regulation of $\alpha_5\beta_1$ phagocytosis by $\alpha_v\beta_3$ and, integrin β_3 cytoplasmic tail is necessary and sufficient, 130:745
Integrin-derived signals, nuclear signaling cascade regulates collagenase gene expression, 129:1707
Intercellular adhesion molecule-2, a peptide derived from regulates avidity of leukocyte integrins CD11b/CD18 and CD11c/CD18, 129:1143
Intercellular communication, transfected connexin45 alters gap junction permeability in cells expressing endogenous connexin43, 130:987
Intercellular junctions, molecular organization of, association of plakoglobin, β-catenin, and α-catenin with vascular endothelial cadherin, 129:203
Interchain binding, *Drosophila* development requires spectrin network formation, 128:71
Interferon, protein of nuclear domain 10 is redistributed upon virus infection and treatment with, molecular characterization of NDP52, 130:1
Interleukin 2, endocytosis of, human T lymphocytes, intracellular localization and fate of receptor α, β, and γ chains, 129:55
Interleukin-1–induced NO production, increased intracellular Ca^{2+}, reducing iNOS mRNA stability, 129:1651
Intermediate chain
  78, of *Chlamydomonas* outer arm dynein, WD-repeat protein required for arm assembly, 129:169
  cytoplasmic dynein binds dynactin through direct interaction between p150z^{Glued} and, 131:1507
  78,000-*Mr* intermediate chain of *Chlamydomonas* outer arm dynein is microtubule-binding protein, 131:399
Intermediate filaments, detyrosinated microtubules function to localize vimentin intermediate filaments to fibroblasts, 131:1275
Internalization, of urokinase receptor dependent on α_2 macroglobulin receptor/Ldl receptor-related protein, 131:1609
Internalization cycle, hormonal regulation of caveolae internalization, 131:929
Internalization signals, apical and basolateral coated pits of MDCK cells do not differ in ability to distinguish between mutant hemagglutinin proteins and, rates of maturation into coated vesicles, 129:1241
Interphase
  delay of HeLa cell cleavage into, dihydrocytochalasin B, postmitotic spindle and telophase disc correlate with synchronous cleavage recovery, 131:191
  organization of chromatin in mega–base pair–sized loops arranged along random walk path in human G0/G1 nucleus during, 130:1239
Intestinal epithelial cells, beta$_G$-spectrin disrupts morphology of, functional domains, 128:1069
Intestine
  programmed cell death in epithelial cells of, induced by three-dimensional growth conditions, suppression by mutant c-H-*ras* oncogene expression, 131:1587
  surface attachment of *Salmonella typhimurium* to epithelia of, imprints subepithelial matrix with gradients chemotactic for neutrophils, 131:1599
  transferrin-like GPI-linked iron-binding protein in detergent-insoluble noncaveolar microdomains at apical surface of fetal, epithelial cells, 131:939
Intracellular localization, COOH-terminal sequence motifs target T cell protein tyrosine phosphatase to ER and nucleus, 131:631
Intracellular signaling, by high molecular weight forms, differential modulation of cell phenotype by molecular weight forms of basic fibroblast growth factor, 129:233
Intracellular solvent flow, in cell surface blebbing, actin polymerization, 129:1589

Intracellular sorting, in alveolar macrophages, synchronized endocytosis, early sorting endosome is transient organelle, 129:1229
Intracellular targeting, insulin-sensitive targeting of GLUT4 glucose transporter in L6 myoblasts is conferred by COOH-terminal cytoplasmic tail, 129:641
Intracellular trafficking, targeting of *Salmonella typhimurium* to vesicles, lysosomal membrane glycoproteins, mannose 6-phosphate receptors, 129:81
Intraflagellar transport, kinesin-like protein FLA10 involved in motility associated with flagellar membrane, 131:1517
Invariant chain, –major histocompatibility class II complexes, multimerization of invariant chain targeting sequence, efficient endosomal localization, 129:1217
Ion channels, exocytotic fusion pore of small granules has conductance similar to, 129:99
Iron, transferrin-binding protein complex is receptor for transferrin uptake in *Trypanosoma brucei*, 131:1173
Iron-binding protein, is transferrin-like and GPI-linked, detergent-insoluble noncaveolar microdomains at apical surface of fetal intestinal epithelial cells, 131:939
Islets of Langerhans, SNAP-25 is expressed in, insulin release, 128:1019
Isometric tension, relationship between actin polymerization, myosin phosphorylation, and, myosin light chain kinase-regulated endothelial cell contraction, 130:613
Isoprenylation, of lamin B3, *Xenopus* oocytes, uptake into nucleus, 129:17
Isoproteins, dominant negative effect of cytoplasmic actin, cardiomyocyte cytoarchitecture and function, 131:1759
Jurkat mutants, T cell mutants with defects in capacitative calcium entry, physiological role of CRAC channels, 131:655
Juxtacrine growth factor, activity of the membrane-anchored heparin-binding EGF-like growth factor, membrane protein CD9/DRAP 27, 128:929
Kap95p, is essential yeast nuclear import factor, GLFG repetitive region of nucleoporin Nup116p, 131:1699
Kar1p, is a component of half-bridge of yeast spindle pole body, Cdc31p-binding protein, 128:863
Kar2p, serves with BiP as molecular chaperone, carboxypeptidase Y folding in yeast, 130:41
Karmellae, degradation of HMG-CoA reductase-induced membranes in fission yeast, *Schizosaccharomyces pombe*, 131:81
KDEL, role of COOH-terminal, targeting of cholera toxin and *Escherichia coli* heat labile toxin in polarized epithelia, 131:951
Keratin, cause structural and functional abnormalities, expression in liver of transgenic mice, 128:157
Keratinocyte growth factor
  is bifunctional regulator of HPV16 DNA-immortalized cervical epithelial cells, 129:843
  specific receptor detection by, immunoglobulin chimera, 129:357
Keratinocytes
  human E48 antigen is GPI-anchored molecule involved in cell–cell adhesion of, highly homologous to murine Ly-6 antigen ThB, 129:1677
  terminal differentiation of, regulation of cell surface β1 integrin levels, 128:1209
  transforming growth factor-β1 modulates β1 and β5 integrin receptors and induces expression of $\alpha v\beta 6$ heterodimer in, implications for wound healing, 129:853
Keratins
  basal network of in stratified squamous epithelia, defining K15 function in absence of K14, 129:1329
  polarized distribution of phosphorylated, epithelial tissues, human keratin 18 phosphorylation, 131:1291
  transgenic mice expressing a keratin 18 conserved arginine mutant, chronic hepatitis, hepatocyte fragility, increased soluble phosphoglycokeratins, 131:1303
Keratocytes, actin filament organization in, fish lamellipodium, 129:1275
K-glypican, highly expressed in developing brain and kidney, GPI-anchored heparan sulfate proteoglycan, 130:1207
Kidney
  Ank3 is major ankyrin in, widely distributed new member of ankyrin gene family, alternatively spliced forms, forms that lack repeat domain, 130:313
  involvement of pRB family in TGFβ-dependent epithelial cell hypertrophy, 129:245
  K-glypican is GPI-anchored heparan sulfate proteoglycan that is highly expressed in developing brain and, 130:1207
  non-muscle α-dystroglycan is involved in epithelial development, 130:79
  reconstitution of vesiculated Golgi membranes into stacks of cisternae, NSP required in stack formation, 129:577
KIF2, new microtubule-based anterograde motor, transport of membranous organelles, kinesin heavy chain or KIF3A/B, 129:157
KIF3A/B, works as microtubule plus end–directed motor for membrane organelle transport, kinesin superfamily protein, 130:1387
Kinase(s)
  cyclin B interaction with microtubule-associated protein 4 targets $P34^{CDC2}$ kinase, M-phase microtubule dynamics, 128:849
  necessary for activation of adenylyl cyclase, *Dictyostelium*, 128:405
  oocyte activation and passage through metaphase/anaphase transition, clams, inhibitors of HMG-CoA reductase, 128:1145
  projectin contains functional domains of, synchronous and asynchronous muscle isoforms, Drosophila bent locus product, 128:393
  regulatory interactions between Vps15 protein kinase and Vps34 PtdIns 3-kinase, vesicle-mediated protein transport, protein sorting to vacuole in yeast, 129:321
Kinesin
  anatomy of flagellar microtubules, polarity, seam, junctions, and lattice, 128:81
  KIF2 is new microtubule-based anterograde motor, transport of membranous organelles, kinesin heavy chain or KIF3A/B, 129:157
  as motor for Golgi-to-ER membrane traffic, microtubule-mediated, 128:293
  point mutation of adenosine triphosphate–binding motif generated, selectively blocks anterograde lysosome membrane transport, 131:1039
Kinesin superfamily protein, works as microtubule plus end–directed motor for membrane organelle transport, KIF3A/B, 130:1387
Kinesin-like motor protein, characterization of minus end–directed, cultured mammalian cells, 129:1049
Kinesin-like protein
  chromokinesin, DNA-binding nuclear protein, 128:761
  FLA10 involved in motility associated with flagellar membrane, 131:1517
  identification of chromosome localization domain of, *Drosophila*, nod, 131:833
  inhibition of microtubule depolymerization-dependent motion by antibodies to, CENP-E, chromosomes, 128:107
  KLP3A, is midbody component required for central spindle assembly and initiation of cytokinesis, *Drosophila*, 129:709
Kinesin-related protein
  associates with centromeres during mitosis, identification of mitotic centromere-associated kinesin, 128:95
  required for anaphase chromosome segregation, *Saccharomyces cerevisiae*, dynein-related proteins, 128:617
Kinetochore(s)
  CENP-F assembles onto, protein of nuclear matrix, late G2, degraded after mitosis, 130:507
  CEP3 encodes a centromere protein in *Saccharomyces cerevisiae*, 128:749
  checkpoint delaying anaphase in response to chromosome monoorientation is mediated by inhibitory signal produced by unattached, 130:941
  chemistry of is sensitive to tension and may link mitotic forces to cell cycle checkpoint, 130:929
  impact of chromosomes and centrosomes on spindle assembly in living cells, 129:1287
  microinjection of mitotic cells with 3F3/2 anti-phosphoepitope antibody delays onset of anaphase, 129:1195
  microtubule dynamics and the metaphase–anaphase transition, 131:721
Kre2p/Mnt1p α1,2-mannosyltransferase, localization and targeting of, *Saccharomyces cerevisiae*, *medial*-Golgi compartment, 131:913
L1, adhesion molecule, cellular ligand for VLA-5, 131:1881
lacZ gene, myosin light chain 3F regulatory sequences confer expression in cardiac and skeletal muscle, transgenic mice, 129:383
Lamellipodium, actin filament organization in, fish keratocyte, 129:1275
Lamin B3, isoprenylation of, *Xenopus* oocytes, uptake into nucleus, 129:17
Lamin B receptor, integral membrane protein targeting to inner nuclear membrane, signals and structural features, 130:15
Laminin
  mediates tissue-specific gene expression in mammary epithelia, 129:591
  non-muscle α-dystroglycan is involved in epithelial development, 130:79
Laminin-1, antibodies against domain E3 of, integrin α6 subunit, perturbation of branching epithelial morphogenesis of submandibular gland, 129:521
Laminins, no suppression of $\alpha_6\beta_4$-mediated cell adhesion to, recombinant tail-less integrin β_4 subunit disrupts hemidesmosomes, 129:473
Lamins, chromatin binding site in tail domain of nuclear, interacts with core histones, 131:33

Lampbrush chromosomes, zinc-binding domain is required for targeting maternal nuclear protein PwA33 to, 131:563
LAR gene, tyrosine phosphatase receptor, alternative splicing is preferential to nervous system, coordinated cell growth, generates isoforms containing CAG repeats, 128:415
Latent transforming growth factor-β binding protein, dual role in storage of latent TGF-β in extracellular matrix and as structural matrix protein, 131:539
LCAM, cadherin-binding specificities of B-cadherin and, 129:1379
Leech, calsensin expressed in subset of peripheral neurons of, novel calcium-binding protein, single axon tract, 129:1355
Leishmania enriettii, targeting of glucose transporters in, mediated by NH_2-terminal domain, 128:499
Lens, epithelial cell apoptosis in, non-congenital cataract development in humans and animals, 130:169
Leukocytes
CD31/PECAM-1 is ligand for $\alpha_v\beta_3$ integrin involved in adhesion of endothelium to, 130:451
CD44 isoforms responsible for presentation of heparin forming growth factor, exon V3, 128:687
heparin is adhesive ligand for leukocyte integrin Mac-1, CD11b/CD18, 130:1473
a peptide derived from intercellular adhesion molecule-2 regulates avidity of integrins CD11b/CD18 and CD11c/CD18 of, 129:1143
P-selectin glycoprotein ligand-1, mediates rolling of human neutrophils on P-selectin, 128:661
Licensing factor, regulates DNA synthesis, cdk2, Cip1, 129:1
Ligand binding
of large and small splice variants of collagen XII, differential expression, 130:1005
peptide isolated from phage display libraries is mimic of RGD-binding site on integrins, 130:1189
Light meromyosin
blocks normal myosin II function, expression in *Dictyostelium*, 130:605
interactions between titin and myosin, 131:1471
Limb development, Hst-1 antisense oligonucleotides block, mouse, FGF-4, 130:997
Limulus, acrosomal process of sperm of, sequence and domain organization of scruin, actin–cross-linking protein, 128:51
Lipid asymmetry, Chinese hamster ovary cell mutant, non-endocytic uptake of fluorescent analogs of phosphatidylserine, cytosol acidification protocol, 128:793
Listeria, actin-based movement of monocytogenes of, actin assembly results from local maintenance of uncapped filament barbed ends at bacterium surface, 130:331
Liver
expression of epidermal keratin protein in liver of transgenic mice, structural and functional abnormalities, 128:157
expression of *MRP* gene-encoded conjugate export pump in, absence from canalicular membrane in transport-deficient mutant hepatocytes, 131:137
reassembly of Golgi stacks from mitotic Golgi fragments in cell-free system, 129:605
transmembrane movement of water-soluble analogue of mannosylphosphoryldolichol, mediated by endoplasmic reticulum protein, 130:529
Liver-enriched transcription factor DBP, cell size regulation, cellular RNA accumulation, transcription factors Oct1 and NF-Y, 128:467
L-MAG, endocytic depletion of, CNS myelin in quaking mice, 131:1811
Lovastatin, in vivo requirement of protein prenylation for maintenance of retinal cytoarchitecture and photoreceptor structure, 130:431
Low-density lipoprotein receptor–related protein
altered expression of, *Pseudomonas* exotoxin–mediated selection, 129:1533
as an endocytic receptor for thrombospondin-1, 129:1403
L-selectin
cytoplasmic domain of interacts with cytoskeletal proteins via α-actinin, receptor positioning in microvilli does not require interaction with α-actinin, 129:1155
sialomucin CD34 is major L-selectin ligand in human tonsil high endothelial venules, 131:261
Lumen, overexpression of calreticulin increases Ca^{2+} capacity of rapidly exchanging Ca^{2+} stores and reveals aspects of microenvironment of, 130:847
Lumenal calcium, depletion from endoplasmic reticulum, inhibition of passive diffusion and transport into nucleus, 128:5
Lumenal retention signal, oligomerized transferrin receptors are selectively retained by, long-lived endocytic recycling compartment, 129:1509
Lung, receptor protein tyrosine phosphatase PTPμ associates with cadherins and catenins in vivo, 130:977
Lymphocytes
adhesion-dependent calcium signaling, human endothelial cells, 128:969
chemokines regulate cellular polarization and adhesion receptor redistribution during interaction of endothelium and extracellular matrix with, involvement of cAMP signaling pathway, 131:495
endocytosis of interleukin 2 receptors in, intracellular localization and fate of receptor α, β, and γ chains, 129:55
homing receptor CD44 in, proteoglycan forms, alternatively spliced variants containing v3 exon, 128:673
integrin VLA-4 supports tethering and rolling in flow on VCAM-1, 128:1243
Lymphosarcoma cells, targeted disruption of CD44 in MDAY-D2 lymphosarcoma cells has no effect on subcutaneous growth or metastatic capacity, 131:1849
Lysin, dimer of abalone sperm, crystal structure, egg envelopes dissociate dimers, monomer is active species, 130:1117
Lysine 40, acetylation of, α-tubulin, not essential in *Tetrahymena thermophila*, 129:1301
Lysosomal glycoprotein 120, targeting in rat MDCK cells, cytoplasmic determinants, lysosomal sorting, endocytosis, 128:321
Lysosomes
determinant in cytoplasmic tail of cation-dependent mannose 6-phosphate receptor prevents trafficking to, 130:1297
intracellular sorting and targeting of melanosomal membrane proteins, sorting of human brown locus protein, GP75, 130:807
membrane glycoproteins of, targeting of *Salmonella typhimurium* to vesicles, mannose 6-phosphate receptors, 129:81
phosphatidylinositol 3-kinase involved in vesicular transport to, wortmannin causes mistargeting of procathepsin D, 130:797
point mutation of adenosine triphosphate–binding motif generated rigor kinesin that selectively blocks anterograde lysosome membrane transport, 131:1039
role for phosphatidylinositol 3-kinase in sorting and transport of enzymes of, mammalian cells, 130:781
targeting signal of, cytoplasmic tail of β chain, directs HLA-DM to MHC class II compartments, 131:351
transport from late endosomes to, sorting of integral membrane proteins in endosomes, depends on vacuolar proton pump, 130:821
Mac-1, heparin is adhesive ligand for leukocyte integrin, CD11b/CD18, 130:1473
α_2 Macroglobulin receptor/low density lipoprotein receptor–related protein, internalization of urokinase receptor dependent on, 131:1609
Macrophages
human monocyte-derived, sequestration of acetylated LDL and cholesterol crystals, 129:133
molecular size–fractionation during endocytosis in, 129:989
synchronized endocytosis and intracellular sorting in aveolar, early sorting endosome is transient organelle, 129:1229
Mad gene, expression of during cell differentiation in vivo, inhibition of cell growth in vitro, 128:1197
Madin-Darby canine kidney cells, differential targeting of glucosylceramide and galactosylceramide after synthesis but not during transcytosis in, 131:645
Mad1p, a phosphoprotein component of spindle assembly checkpoint in budding yeast, 131:709
Major histocompatibility complex class I molecules, misfolded molecules accumulate in expanded ER-Golgi intermediate compartment, 131:1403
Major histocompatibility complex class II compartments, lysosomal targeting signal in cytoplasmic tail of β chain directs HLA-DM to, 131:351
Major histocompatibility complex class II molecules, –invariant chain complexes, multimerization of invariant chain targeting sequence, efficient endosomal localization, 129:1217
Mammal, α1- and β1-syntrophin, alternative splice-prone region, dystrophin COOH terminus, 128:373
Mammalian cells, characterization of minus end–directed kinesin-like motor protein from, 129:1049
Mammary cells
bcl-2 overexpression inhibits cell death and promotes morphogenesis but not tumorigenesis of, human epithelial, 129:1363
extracellular matrix regulates whey acidic protein gene expression by suppression of TGF-α in, epithelial, in culture and transgenic mice, 129:1115

gap junction turnover, intracellular trafficking, and phosphorylation of connexin43 in Brefeldin A-treated rat mammary tumor cells, 131:1193
Mammary epithelial cells
laminin mediates tissue-specific gene expression in, 129:591
p53 activation of apoptosis in, survival function of EGF and insulin, 128:1185
Mammary glands
glucocorticoid and progesterone inhibit involution and programmed cell death in, mouse, 131:1095
sequential requirement of hepatocyte growth factor and neuregulin in morphogenesis and differentiation of, 131:215
Manganese, supports yeast cell-cycle progression in place of calcium, 131:1025
Mannoproteins, cross-linking of α-agglutinin and β1,6-glucan, glycosyl phosphatidylinositol, *Saccharomyces cerevisiae* cell wall, 128:333
Mannose 6-phosphate receptors, bypassed compartments with, targeting of *Salmonella typhimurium*, vesicles containing lysosomal membrane glycoproteins, 129:81
Mannosylphosphoryldolichol, transmembrane movement of water-soluble analogue of, mediated by endoplasmic reticulum protein, 130:529
MAP4
function of in living cells, green fluorescent protein chimeras, 130:639
interaction with cyclin B targets $P34^{CDC2}$ kinase, M-phase microtubule dynamics, 128:849
Mas37p, a novel receptor subunit for protein import into mitochondria, 129:25
Mate selection
FAR1 required for oriented polarization of yeast cells in response to mating pheromones, 131:863
Saccharomyces cerevisiae cells execute default pathway for, absence of pheromone gradients, 131:845
Matricellular proteins, diversity of function in, appraisal of thrombospondin 1, 130:503
Matrix protein, role for latent transforming growth factor-β binding protein in storage of latent TGF-β in extracellular matrix and as, 131:539
Mcl-1, intracellular distribution and pattern of expression overlaps with those of Bcl-2, 128:1173
MCM2-3-5 family, BM28 is member of, displaced from chromatin during DNA replication, 129:1433
MDCK cells
apical and basolateral coated pits of, rates of maturation into coated vesicles, mutant hemagglutinin proteins with different internalization signals, 129:1241
proteolytic products in, polarized sorting of β-amyloid precursor protein, independent signals, 128:537
targeting of rat lgp120 (lamp-I) in, cytoplasmic determinants, lysosomal sorting, endocytosis, 128:321
MDCK II cells, generating Na/K-ATPase polarity in, epithelial cells, 130:1105
medial-Golgi, localization and targeting of the *Saccharomyces cerevisiae* Kre2p/Mntlp α1,2-mannosyltransferase to compartment of, 131:913
Meiotic cell cycle, oocyte activation and passage through metaphase/anaphase transition of, clams, inhibitors of HMG-CoA reductase, 128:1145
Melanoma
NPXY motif required in integrin β3 subunit cytoplasmic tail for cell migration in, in vitro and in vivo, 130:441
urokinase-type plasminogen activator receptor localized in caveolae, GPI-linked protein, 129:335
Melanosomes, intracellular sorting and targeting of membrane proteins of, sorting of human brown locus protein, GP75, 130:807
Membrane binding, mechanochemistry of protein 4.1's spectrin–actin-binding domain, ternary complex interactions, network integration, structural strengthening, 130:897
Membrane degradation, in fission yeast, *Schizosaccharomyces pombe*, induced by HMG-CoA reductase, 131:81
Membrane organelle transport, KIF3A/B works as microtubule plus end–directed motor for, kinesin superfamily protein, 130:1387
Membrane protein ectodomains, transforming growth factor-α, β-amyloid precursor protein, secretory mechanism, 128:433
Membrane proteins
CD9/DRAP 27 potentiates juxtacrine growth factor activity, heparin-binding EGF-like growth factor, 128:929
of Golgi apparatus and vacuole, *vps1* mutant yeast cells, plasma membrane, 129:35
intracellular sorting and targeting of melanosomal, sorting of human brown locus protein, GP75, 130:807
novel family containing a disintegrin and metalloprotease domain, ADAM, cell–cell and cell–matrix interactions, 131:275
sorting of integral, transport from late endosomes to lysosomes, depends on vacuolar proton pump, 130:821
Membrane retrieval, into large vesicles after exocytosis in sea urchin eggs, 131:1183
Membrane spreading, ezrin NH_2-terminal domain inhibits cell extension, COOH-terminal domain, 128:1081
Membrane traffic, overexpression of wild-type and mutant ARF1 and ARF6, nonoverlapping membrane compartments, 128:1003
Membrane trafficking
developmental regulation of, synaptogenesis in mouse diaphragm muscle, 130:959
Rab7 is important regulator of late endocytic membrane traffic, 131:1435
structure of synaptogyrin defines novel synaptic vesicle protein, p29, 131:1801
VPS27 controls vacuolar and endocytic traffic through prevacuolar compartment in *Saccharomyces cerevisiae*, 131:603
Membrane transport, from Golgi-to-ER, kinesin, microtubule-mediated, 128:293
Mesenchymal cells, expression of *Notch 1*, *2*, and *3* regulated by interactions of epithelial cells and, retinoic acid, developing mouse tooth, determination of ameloblast cell fate, 130:407
Mesodermal cells, conversion of immortalized progenitor, osteogenic, chondrogenic, or adipogenic pathways, 130:1461
Met genes, role in early development of metanephros, hepatocyte growth factor/scatter factor, 128:171
Metalloprotease domain, disintegrin domain, novel family of membrane proteins, ADAM, cell–cell and cell–matrix interactions, 131:275
Metalloproteinase, cooperative signaling by α5β1 and α4β1 integrins regulates gene expression of, fibroblasts adhering to fibronectin, 129:867
Metanephros, roles of hepatocyte growth factor/scatter factor and met receptor in early development of, 128:171
Metaphase, postprophase topoisomerase II–dependent chromatid core separation step in formation of chromosomes during, 131:7
Metaphase–anaphase transition, kinetochore microtubule dynamics, 131:721
Metastasis
NPXY motif required in integrin β3 subunit cytoplasmic tail for melanoma cell migration in vitro and in vivo, 130:441
targeted disruption of CD44 in MDAY-D2 lymphosarcoma cells has no effect on subcutaneous growth or, 131:1849
Methylation, of cytoplasmic and nuclear forms of protein phosphatase 2A during cell cycle progression, altered conformation, 129:397
Mice, synapsin I deficiency results in structural change in presynaptic terminals in nervous system of, 131:1789
Microfibrils, developmental expression of fibrillin genes suggests heterogeneity of, extracellular microfibrils, 129:1165
Microfilaments
axonal transport of mitochondria along microtubules and f-actin in vertebrate neurons, 131:1315
forced expression of chimeric human fibroblast tropomyosin mutants affects cytokinesis, 129:697
phragmoplast of green alga *Spirogyra* is functionally distinct from higher plant phragmoplast, 130:1359
trypanosome-soluble factor induces rearrangement of, IP_3 formation, intracellular Ca^{2+} mobilization, 129:1263
Microtubule assembly, γ-tubulin can nucleate, self-assemble into novel tubular structures in mammalian cells, 130:1137
Microtubule depolymerization
activates NF-κB, cytoskeletal control of gene expression, 128:1111
motor proteins as couplers to, 128:1
Microtubule depolymerization-dependent motion inhibited by antibodies to kinesin motor domain and CENP-E, chromosomes, 128:107
Microtubule lattice structure
anatomy of flagellar, polarity, seam, and junctions, 128:81
structural changes accompanying GTP hydrolysis in, hydrolyzable analogue, guanylyl-(α,β)-methylene-diphosphonate, 128:117
Microtubule rearrangements
role in growth cone motility and axonal growth, 128:139
role in growth cone turning, substrate boundaries, 128:127
Microtubule transport, establishes nonuniform polarity orientation, dendritic, 130:93
Microtubule-associated protein, required for anaphase spindle movement in *Saccharomyces cerevisiae*, 130:1373
Microtubule-binding protein, 78,000-M_r intermediate chain of *Chlamydomonas* outer arm dynein is, 131:399
Microtubules
autocrine motility factor receptor is marker for distinct membranous tubular organelle, 129:459
axonal transport of mitochondria along f-actin and, vertebrate neurons, 131:1315

binding of E-MAP-115 to, regulated by cell cycle–dependent phosphorylation, 131:1015
dependent and independent steps involve, caveolin cycles between plasma membrane caveolae and Golgi complex, 131:1421
detyrosinated microtubules function to localize vimentin intermediate filaments to fibroblasts, 131:1275
KIF3A/B works as microtubule plus end–directed motor for membrane organelle transport, kinesin superfamily protein, 130:1387
kinetochore dynamics and the metaphase–anaphase transition, 131:721
MAP4 function in living cells using green fluorescent protein chimeras, 130:639
as mediators for Golgi-to-ER membrane traffic, kinesin, 128:293
membrane/microtubule tip attachment complexes allow assembly dynamics of plus ends to push and pull membranes into tubulovesicular networks in interphase *Xenopus* egg extracts, 130:1161
microtubule-associated protein 4 targets $P34^{CDC2}$ kinase to, cyclin B interaction, M-phase microtubule dynamics, 128:849
NuMA is required for organization of, aster-like mitotic arrays, 131:693
phragmoplast of green alga *Spirogyra* is functionally distinct from higher plant phragmoplast, 130:1359
point mutation of adenosine triphosphate–binding motif generated rigor kinesin that selectively blocks anterograde lysosome membrane transport, 131:1039
polarity of in trypanosome cell cycle, organelle positioning, segregation, and cytokinesis, 128:1163
protein phosphatase 2A is associated with, regulated during cell cycle, 128:1131
rigidity of, increased by stabilizing agents, 130:909
Spnr is localized to cytoplasmic, murine RNA-binding protein, 129:1023
structure of growing microtubule ends, two-dimensional sheets close into tubes at variable rates, 129:1311
three-dimensional structural characterization of centrosomes from early *Drosophila* embryos, 130:1149
three-dimensional ultrastructural analysis of *Saccharomyces cerevisiae* mitotic spindle, 129:1601
γ-tubulin gene essential for cell growth and organization of, *Saccharomyces cerevisiae*, 131:1775
γ-tubulin is minus end-specific microtubule binding protein, 131:207
yeast Numlp associates with mother cell cortex during S/G2 phase and affects functions of, 131:1003

Microvilli
ezrin oligomers are major cytoskeletal components of placental, cortical morphogenesis, 131:1231
receptor positioning in does not require interaction with α-actinin, cytoplasmic domain of L-selectin interacts with cytoskeletal proteins via α-actinin, 129:1155

Midkine, is regulated by retinoic acid and epithelial–mesenchymal interactions in developing mouse tooth, cell proliferation and morphogenesis, heparin-binding growth/differentiation factor, 129:267

Migration, affected by lack of β1 integrin gene, embryonic stem cells, morphology, adhesion, integration into blastocysts, 128:979

Mineralization, constitutive expression of calreticulin in osteoblasts inhibits, 131:1351

Mink, receptor protein tyrosine phosphatase PTPμ associates with cadherins and catenins in vivo, 130:977

Mitochondria
alterations in structure and function of, dexamethasone-induced thymocyte apoptosis, 130:157
axonal transport of, microtubules and f-actin in vertebrate neurons, 131:1315
peroxisome-to-mitochondrion mistargeting of AGT in primary hyperoxaluria type 1, alanine/glyoxylate aminotransferase 1 imported into peroxisomes via PTS1 translocation pathway, 131:95
receptor subunit for protein import into, Mas37p, 129:25

Mitochondrial motor, identification of on mitochondrial surface, actin-dependent mitochondrial motility in mitotic yeast and cell-free systems, 130:345

Mitosis
human protein kinase implicated in spindle formation during, cell cycle regulation of activity and subcellular localization of PLK1, 129:1617
inhibition of ribosomal RNA gene transcription during, 129:561

Mitosis promoting factor, nuclear envelope breakdown is under nuclear not cytoplasmic control in sea urchin zygotes, 129:1447

Mitotic asters, NuMA is required for organization of microtubules into aster-like mitotic arrays, 131:693

Mitotic centromere-associated kinesin, identification and partial characterization of, kinesin-related protein associates with centromeres during mitosis, 128:95

Mitotic fragmentation, of Golgi stacks, role for tubular networks and a COP I-independent pathway, 130:1027

Mitotic spindle, retention of postmitotic spindle and telophase disc correlates with synchronous cleavage recovery, delay of HeLa cell cleavage into interphase using dihydrocytochalasin B, 131:191

Molecular marker, for centriole maturation in mammalian cell cycle, 130:919

Molecular weight forms, possible intracellular signaling by, differential modulation of cell phenotype by molecular weight forms of basic fibroblast growth factor, 129:233

Monoclonal antibodies
differential expression of two basement membrane collagen genes demonstrated by immunofluorescence staining using, COL4A6, COL4A5, 130:1219
large and small splice variants of collagen XII, differential expression and ligand binding, 130:1005

Monocytogenes, actin-based movement of Listeria, actin assembly results from local maintenance of uncapped filament barbed ends at bacterium surface, 130:331

Morphogenesis
bcl-2 overexpression inhibits cell death and promotes, but not tumorigenesis of human mammary epithelial cells, 129:1363
and differentiation of mammary gland, sequential requirement of hepatocyte growth factor and neuregulin, 131:215
of fission yeast, new genes and their role during cell cycle, 131:1529
hepatocyte growth factor/scatter factor induces variety of tissue-specific morphogenic programs in epithelial cells, 131:1573

Motility
of growth cones, role of microtubule dynamics, axonal growth, 128:139
of Listeria monocytogenes, actin-based movement, actin assembly results from local maintenance of uncapped filament barbed ends at bacterium surface, 130:331
in mitotic yeast and cell-free systems, actin-dependent, motor activity on mitochondrial surface, 130:345
role of microtubules in growth cone turning, substrate boundaries, 128:127

Motor neurons
ARIA is concentrated in synaptic basal lamina of developing chick neuromuscular junction, 130:1423
increasing neurofilament-M expression results in neurofilamentous accumulation in, reduces axonal NF-H, inhibits radial growth, 130:1413

Motor proteins
as couplers, depolymerizing microtubules, 128:1
KIF3A/B works as microtubule plus end–directed motor for membrane organelle transport, kinesin superfamily protein, 130:1387
kinesin- and dynein-related proteins, anaphase chromosome segregation, *Saccharomyces cerevisiae*, 128:617
point mutation of adenosine triphosphate–binding motif generated rigor kinesin that selectively blocks anterograde lysosome membrane transport, 131:1039

Mouse
Ank3 is widely distributed new member of ankyrin gene family and major ankyrin in kidney of, alternatively spliced forms, forms that lack repeat domain, 130:313
brain-derived neurotrophic factor promoter regions in, tissue-specific, axotomy-, and neuronal activity–induced expression, 128:185
cadherin function in intestinal epithelium of, roles of adhesion, maintenance of differentiation, regulation of programmed cell death, 129:489
cardiac and skeletal muscle expression in, myosin light chain 3F regulatory sequences, 129:383
cholesterol depletion and modification of COOH-terminal targeting sequence of prion protein, inhibition of scrapie isoform, 129:121
desmoglein 3 confers adhesive function on extracellular domain of E-cadherin, pemphigus vulgaris antigen, catenins, 128:939
developmental regulation of membrane traffic organization during synaptogenesis in diaphragm muscle in, 130:959
DNA-binding protein from brain of, stimulates transcription of myelin basic protein gene in oligodendrocytic cells, 130:1171
epidermal keratin protein in liver of, structural and functional abnormalities, 128:157

expression of *mad* gene during cell differentiation in vivo, inhibition of cell growth in vitro, 128:1197
Hst-1 antisense oligonucleotides block limb development in, FGF-4, 130:997
human COL2A1-directed SV40 T antigen expression in, abnormal skeletal development, 128:223
induction of nestin contributes to generation of glial scar tissue after CNS injury, 131:453
mechanical function of dystrophin, muscle cells, 128:355
membrane protein CD9/DRAP 27 potentiates juxtacrine growth factor activity, heparin-binding EGF-like growth factor, 128:929
midkine is regulated by retinoic acid and epithelial–mesenchymal interactions in developing tooth of, cell proliferation and morphogenesis, heparin-binding growth/differentiation factor, 129:267
myogenesis in, myogenin required, 128:563
roles of hepatocyte growth factor/scatter factor and met receptor, early development of metanephros, 128:171
tooth development in, expression of *Notch 1*, *2*, and *3* regulated by epithelial-mesenchymal interactions and retinoic acid, determination of ameloblast cell fate, 130:407
type I collagen of impairs tissue remodeling, targeted mutation at collagenase cleavage site, 130:227
type X collagen gene expression in chondrocytes of, immortalization by temperature-sensitive simian virus 40 large tumor antigen, 128:239
Mouse hepatitis virus, envelope glycoprotein interactions in coronavirus assembly, 131:339
MRF4, adaptation of gene expression of nicotinic acetylcholine receptor, myogenin, and, long-term muscle denervation, 131:1341
mRNA
conserved epitope on subset of SR proteins defines larger family of, splicing factors, 129:899
increased intracellular Ca^{2+} selectively suppresses IL-1–induced NO production by reducing stability of, iNOS, 129:1651
yeast nucleoporin *RAT7/NUP159* causes rapid cessation of export of, conditional allele, reversible clustering of nuclear pore complexes, 129:939
mRNA transport, Nup120p required for NPC distribution and, yeast nucleoporin, 131:1659
Mt-PK gene, trinucleotide repeat transcripts in nuclei of myotonic dystrophy cells, 128:995
Multi-drug resistance protein, expression of *MRP* gene-encoded conjugate export pump in liver, absence from canalicular membrane in transport-deficient mutant hepatocytes, 131:137
Murine tissues, ryanodine receptor/calcium channel genes are expressed in, brain and peripheral tissues, 128:893
Muscle
dystrophin in, mechanical function, 128:355
myogenin is required for late but not early myogenesis, mouse development, 128:563
synchronous and asynchronous isoforms of, projectin contains functional kinase domains, Drosophila bent locus product, 128:393
trinucleotide repeat transcripts in nuclei of myotonic dystrophy cells, 128:995
Muscle cells–nerve synaptogenesis, distribution of α-dystroglycan, 129:1093
Muscle denervation, adaptation of nicotinic acetylcholine receptor, myogenin, and MRF4 gene expression to long-term, 131:1341
Muscle-specific domain, contained in forms of NCAM polypeptides, heart development, association with Z discs, 128:209
Mutagenesis, of cytoplasmic domain of asialoglycoprotein receptor subunit H1 result in *trans*-Golgi retention, *trans*-Golgi retention of plasma membrane protein, 130:285
Myelin, endocytic depletion of L-MAG from, central nervous system, quaking mice, 131:1811
Myelin basic protein gene, DNA-binding protein from mouse brain stimulates transcription of, oligodendrocytic cells, 130:1171
Myelin-associated glycoproteins, endocytic depletion of L-MAG from CNS myelin in quaking mice, 131:1811
Myeloblastic leukemia cell line, Mcl-1 intracellular distribution and pattern of expression overlaps with those of Bcl-2, 128:1173
myoA gene, is an essential myosin I required for secretion and polarized growth, *Aspergillus nidulans*, 128:577
Myoblasts
calsequestrin in, differential localization and role, 128:341
insulin-sensitive targeting of GLUT4 glucose transporter in, COOH-terminal cytoplasmic tail, 129:641
proenkephalin is nuclear protein responsive to growth arrest and differentiation signals, 130:1251
successful transplantation of histocompatible, dystrophin-deficient mdx mouse, production of antibodies against dystrophin, 131:975
Myofibrillogenesis
inhibition of CapZ during, alteration of assembly of actin filaments, 128:61
NCAM polypeptides in, association with Z discs, muscle-specific domain, 128:209
transglutaminase in, chick embryonic myoblasts in culture, 130:1127
Myofibrils, thin filament assembly in embryonic chick cardiac myocytes, tropomodulin requires tropomyosin for assembly, 129:683
Myogenesis, regulation of muscle-specific transgene by retinoic acid, 129:1345
Myogenin
adaptation of gene expression of nicotinic acetylcholine receptor, MRF4, and, long-term muscle denervation, 131:1341
required for late myogenesis, mouse development, 128:563
Myosin
class V Myo2 in yeast, vesicular transport, 128:1055
interactions between titin and, 131:1471
is involved in postmitotic cell spreading, 131:179
is required for proper organization of *Drosophila* syncytial blastoderm, 95F unconventional myosin, 129:1575
Myosin I
Dictyostelium myosin I double mutants exhibit conditional defects in pinocytosis, 131:1205
localizes to Con A–inducible F-actin–rich structures at cell–cell contacts, SH3 domain, rat, 129:819
phosphorylated isoforms of in *Acanthamoeba castellanii*, quantification and localization, 130:591
required for secretion and polarized growth, *myoA* of *Aspergillus nidulans*, 128:577
Myosin II
expression of light meromyosin in *Dictyostelium* blocks function of, 130:605
filament assemblies in active lamella of fibroblasts, morphogenesis and role in formation of actin filament bundles, 131:989
Myosin light chain 1/3, regulation of muscle-specific transgene by retinoic acid, 129:1345
Myosin light chain kinase-regulated endothelial cell contraction, isometric tension, actin polymerization, myosin phosphorylation, 130:613
Myosin light chain 3F regulatory sequences, confer cardiac and skeletal muscle expression, transgenic mice, 129:383
Myotonic dystrophy, trinucleotide repeat transcripts in nuclei of, 128:995
Myotubes
activation of v-Src disrupts sarcomeres in, quail, maintenance of differentiated state in skeletal muscle, 130:871
immobilization of nicotinic acetylcholine receptors in mouse C2 myotubes, agrin-induced protein tyrosine phosphorylation, 131:441
myr 3, myosin I from rat localizes to Con A–inducible F-actin–rich structures at cell–cell contacts, SH3 domain, 129:819
N-acetylgalactosaminylphosphotransferase, interacts with endogenous proteoglycan ligand, retina cell surface, inhibition of cadherin-mediated adhesion, 129:1391
β1–6 *N*-acetylglucosaminyltransferase V, reduced contact-inhibition and substratum adhesion in epithelial cells expressing, 130:383
NADPH:protochlorophyllide oxidoreductase, enzymatic product formation impairs translocation competence of, chloroplast receptor–binding function, plastid precursor protein, 129:299
Na/K-ATPase, polarity of, MDCK epithelial cells, 130:1105
NAP1 protein
acts with Clb2 to perform mitotic functions and to suppress polar bud growth in budding yeast, 130:675
interacts with B-type cyclins, NAP/SET family of proteins, 130:661
Nascent chain
interacts with Sec61p, stage- and ribosome-specific alterations, translocation across ER membrane, 129:957
NAC covers ribosome-associated, regions of nascent chains emerging from peptidyl transferase center, 130:519
Nascent polypeptide-associated complex, covers ribosome-associated nascent chains, regions of nascent chains emerging from peptidyl transferase center, 130:519
NC-2 domain, procollagen VII is processed to collagen VII through removal of, 131:551
NDP52, molecular characterization of, novel protein of nuclear domain 10, redistributed upon virus infection and interferon treatment, 130:1
Nephrogenesis, roles of hepatocyte growth factor/scatter factor and met receptor in, early development of metanephros, 128:171

Nerve growth factor
induction of cell death by deprivation of, viral proteins protect sympathetic neurons, EIB19K, p35, 128:201
regulation of gene expression of, sympathetic neurons, 130:1435
Nerve growth factor-stimulated retrograde transport of trkA, mammalian nervous system, 130:149
Nerves–muscle synaptogenesis, distribution of α-dystroglycan, embryonic nerve, 129:1093
Nervous system
extracellular matrix protein expressed in developing and adult, thrombospondin-4 promotes neurite outgrowth, 131:1083
synapsin I deficiency results in structural change in presynaptic terminals in, murine, 131:1789
Nestin, rapid, widespread, and longlasting induction of, contributes to generation of glial scar tissue after CNS injury, 131:453
Neural cell adhesion molecules
binding between axonin-1 and Nr-CAM/Bravo, neuron–glia interaction, 131:1067
in heart development, association with Z discs, muscle-specific domain, 128:209
Neural cells, epidermal growth factor promotes neural phenotype in thymic epithelial cells, neuropoietic cytokine expression, 130:183
Neuregulin, sequential requirement of hepatocyte growth factor and, morphogenesis and differentiation of mammary gland, 131:215
Neurites
amyloid precursor protein inhibits outgrowth of, downregulation, 128:919
Ca^{2+} waves in PC12. bidirectional receptor-oriented form of Ca^{2+} signaling, 129:797
enhancement of F11-mediated outgrowth of, functional domains of tenascin-R polypeptide, cell attachment site, binding with F11, 130:473
outgrowth of in PC12 cells, stimulation by EGF and KCl depolarization, Ca^{2+}-independent phenomenon, 130:701
thrombospondin-4 promotes outgrowth of, extracellular matrix protein expressed in developing and adult nervous system, 131:1083
Neuroblastoma cells
glycolipid-anchored proteins in, formation of detergent-resistant complexes without caveolin, 129:619
inhibition of cyclin-dependent kinase activity triggers neuronal differentiation of, mouse, 131:227
Neuroectoderm, cell differentiation into, apoptosis, absence of functional retinoblastoma family proteins, 129:779
Neuroendocrine cells, 7B2 protein facilitates maturation of proPC2 in, expression of enzymatic activity, 129:1641
Neurofilament subunit proteins, overexpression of human NFM subunit in transgenic mice modifies level of endogenous NFL and phosphorylation state of NFH subunits, 129:1629
Neurofilament subunits, increasing neurofilament-M expression reduces axonal NF-H, inhibits radial growth, results in neurofilamentous accumulation in motor neurons, 130:1413
Neurofilaments, two functions of carboxyl-terminal tail domain of NF-M upon assembly of, cross-bridge formation and longitudinal elongation of filaments, 129:411
Neuromuscular junction, ARIA is concentrated in synaptic basal lamina of developing chick, 130:1423
Neuromuscular synapses, local neurotrophic repression of gene transcripts encoding fetal AChRs at, rat, 130:949
Neuron–glia cell adhesion molecule, functional analysis of posttranslational cleavage products of, 130:733
Neuron–glia interaction, binding between neural cell adhesion molecules axonin-1 and Nr-CAM/Bravo, 131:1067
Neuronal development, LAR tyrosine phosphatase receptor, alternative splicing is preferential to nervous system, coordinated cell growth, generates isoforms containing CAG repeats, 128:415
Neuronal differentiation
brain-derived neurotrophic factor promoter regions, tissue-specific, axotomy-, and neuronal activity–induced expression, transgenic mice, 128:185
inhibition of cyclin-dependent kinase activity triggers, mouse neuroblastoma cells, 131:227
Neurons
axonal growth of in rat, axonal synthesis of phosphatidylcholine, sympathetic, 128:913
axonal transport of mitochondria along microtubules and f-actin in vertebrate, 131:1315
inhibition of neurite outgrowth in vitro, downregulation of amyloid precursor protein, 128:919
interaction of tau with neural plasma membrane mediated by tau's amino-terminal projection domain, 131:1327
intracellular routing of wild-type and mutated polymeric immunoglobulin receptor in hippocampal, in culture, 130:1447
neuron-specific isoform of brain ankyrin is targeted to axons of rat cerebellar, 440-kD ankyrin$_B$, 131:1821
regulation of nerve growth factor receptor gene expression in sympathetic, 130:1435
retrograde and transcytotic transport in, trafficking of cell surface β-amyloid precursor protein, 129:431
transforming growth factor-β1 regulates axon/Schwann cell interactions, 129:443
Neurotrophic factor, for avian and mammalian peripheral neurons, peripheral expression of GDNF, 130:137
Neurotrophic signals, local neurotrophic repression of gene transcripts encoding fetal AChRs at rat neuromuscular synapses, 130:949
Neutrophils
cell surface–bound elastase and cathepsin G on, human, non-oxidative mechanism by which neutrophils focus and preserve catalytic activity of serine proteinases, 131:775
detachment of cultured cells from substratum induced by neutrophil-derived oxidant NH_2Cl, synergistic role of phosphotyrosine and intracellular Ca^{2+} concentration, 131:509
exocytotic fusion pore of small granules has conductance similar to ion channel, 129:99
P-selectin must extend sufficient length from plasma membrane to mediate rolling of, 131:1893
rolling of on P-selectin, glycoprotein ligand-1, 661 P-selectin glycoprotein ligand-1, mediates rolling of human neutrophils on P-selectin, 128:661
surface attachment of *Salmonella typhimurium* to intestinal epithelia imprints subepithelial matrix with gradients chemotactic for, 131:1599
NF-κB, activated by microtubule depolymerization, cytoskeletal control of gene expression, 128:1111
NF-kappa B, thiol agents and Bcl-2 identify alphavirus-induced apoptotic pathway that requires activation of, transcription factor, 131:1149
NF-M, two functions of carboxyl-terminal tail domain of, neurofilament assembly, cross-bridge formation and longitudinal elongation of filaments, 129:411
NH_2Cl, detachment of cultured cells from substratum induced by neutrophil-derived oxidant NH_2Cl, synergistic role of phosphotyrosine and intracellular Ca^{2+} concentration, 131:509
Nicotinic acetylcholine receptors
adaptation of gene expression of myogenin, MRF4, and, long-term muscle denervation, 131:1341
immobilization of in mouse C2 myotubes, agrin-induced protein tyrosine phosphorylation, 131:441
interaction with cytoskeleton, agrin-activated protein tyrosine kinase, 128:1121
NIH3T3 cells, connexin 43/β-galactosidase fusion protein inhibits gap junctional communication in, 130:419
Nitric oxide, increased intracellular Ca^{2+} selectively suppresses IL-1–induced production of, reducing iNOS mRNA stability, 129:1651
Nod protein, identification of chromosome localization domain of, *Drosophila*, kinesin-like, 131:833
Notch genes, expression of *Notch 1*, *2*, and *3* regulated by epithelial-mesenchymal interactions and retinoic acid in developing mouse tooth, determination of ameloblast cell fate, 130:407
NPXY motif, required in integrin β3 subunit cytoplasmic tail for melanoma cell migration in vitro and in vivo, 130:441
Nr-CAM/Bravo, binding between axonin-1 and, neural cell adhesion molecules, neuron–glia interaction, 131:1067
NSF, required for stack formation, reconstitution of vesiculated Golgi membranes into stacks of cisternae, 129:577
Nsp1p protein, novel nuclear pore protein Nup82p binds to fraction of, 130:1263
Nuclear domain 10 protein, molecular characterization of NDP52, redistributed upon virus infection and interferon treatment, 130:1
Nuclear domains, transcription-dependent redistribution of large subunit of RNA polymerase II to, 129:287
Nuclear envelope breakdown, is under nuclear not cytoplasmic control in sea urchin zygotes, 129:1447
Nuclear envelopes
chromosomes initiate spindle assembly upon dissolution of, grasshopper spermatocytes, 131:1125
isolation and characterization of, *Saccharomyces*, 131:19
Nuclear import
Rna1p is required for, Ran/TC4 GTPase activating protein, 130:1017
of v-Jun is regulated by phosphorylation of serine adjacent to nuclear localization signal, cell cycle, 130:255
Nuclear import factor, Kap95p is essential, GLFG repetitive region of nucleoporin Nup116p, yeast, 131:1699

Nuclear localization
cell cycle–dependent localization of CPI90 centrosomal protein is determined by coordinate action of two separable domains, 131:1261
Drosophila protein with cell cycle-dependent, pendulin is required for normal cell proliferation, 129:1491
dynamic localization of RNase MRP RNA in nucleolus observed by fluorescent RNA cytochemistry, living cells, 131:1649
in hnRNP A1 protein, 129:551
proenkephalin is nuclear protein responsive to growth arrest and differentiation signals, 130:1251
in testis, gene product SRY, 128:737
Nuclear localization signal, cell cycle–dependent nuclear import of v-Jun is regulated by phosphorylation of serine adjacent to, 130:255
Nuclear matrix, CENP-F is protein of, assembly onto kinetochores at late G2, degraded after mitosis, 130:507
Nuclear movement, spindle dynamics and cell cycle regulation of dynein in budding yeast, 130:687
Nuclear pore complex protein p62, NTF2 interacts with, cytosolic factor for nuclear import, 129:925
Nuclear pore complexes
assembly of, biochemical assay for annulate lamellae formation, 129:1459
clustering of, nuclear accumulation of poly(A)$^+$ RNA associated with mutation of *Saccharomyces cerevisiae RAT2/NUP120* gene, 131:1677
complementation with vertebrate homologue Nup155p and functional interactions with yeast nuclear pore–membrane protein Pom152p, yeast nucleoporins Nup170p and Nup157p, 131:1133
depletion of calcium from lumen of endoplasmic reticulum, inhibition of passive diffusion and transport into nucleus, 128:5
GTP hydrolysis by Ran occurs at, early step of protein import, 131:571
isolation and characterization of nuclear envelopes from *Saccharomyces*, 131:19
novel nuclear pore protein Nup82p binds to fraction of Nsplp, 130:1263
nucleoporin p62 complex of rat, binding of nucleoporin p54 to the rod domain of p62, 128:251
Nup120p required for mRNA transport and distribution of, yeast nucleoporin, 131:1659
reversible clustering of, conditional allele of yeast nucleoporin *RAT7/NUP159* causes rapid cessation of mRNA export, 129:939
sequence and characterization of nuclear protein import factor p97, 130:265
structural interaction between a specific translocating RNP particle and, 129:1205
Nuclear pore protein, reconstituted nuclei depleted of a vertebrate GLFG, p97, defective in nuclear growth and replication, 128:721
Nuclear positioning, coiled-coil protein required for, *Aspergillus nidulans* anucleate primary sterigmata, asexual development, 128:485
Nuclear protein
that associates with the mitotic apparatus, is required for organization of microtubules into aster-like mitotic arrays, 131:693
zinc-binding domain is required for targeting maternal nuclear protein PwA33 to lampbrush chromosome loops, 131:563
Nuclear protein import, *overgrown hematopoietic organs-31* tumor suppressor gene of *Drosophila*, *importin*-like protein accumulates in nucleus at onset of mitosis, 129:1473
Nuclear protein import factor p97, sequence and characterization of, 130:265
Nuclear signaling, regulates collagenase gene expression in response to integrin-derived signals, 129:1707
Nuclear spreads, visualization of bipartite rRNA domains, 128:15
Nuclear transport
inhibition of signal-mediated, depletion of calcium from lumen of endoplasmic reticulum, inhibition of passive diffusion, 128:5
reconstituted nuclei depleted of a vertebrate GLFG nuclear pore protein, p97, defective in nuclear growth and replication, 128:721
Nuclear transport factor 2, interacts with nuclear pore complex protein p62, cytosolic factor for nuclear import, 129:925
Nucleolus
dynamic localization of RNase MRP RNA in, fluorescent RNA cytochemistry, living cells, 131:1649
mutational analysis of p80 coilin indicates functional interaction between coiled bodies and, 131:817
Nucleolus organizing region, inhibition of ribosomal RNA gene transcription during, 129:561
Nucleoplasm, structural arrangements of specific pre-mRNA transcription and splicing with SC-35 domains, nonrandom gene organization, 131:1635
Nucleoporin
causes rapid cessation of mRNA export and reversible clustering of nuclear pore complexes, conditional allele of yeast *RAT7/NUP159*, 129:939
GLFG repetitive region of Nup116p, interacts with Kap95p, essential yeast nuclear import factor, 131:1699
NUP82 is essential yeast, required for poly(A)$^+$ RNA export, 130:1275
required for NPC distribution and mRNA transport, yeast Nup120p, 131:1659
Nucleoporins
Nup170p and Nup157p in yeast, complementation with vertebrate homologue Nup155p and functional interactions with yeast nuclear pore–membrane protein Pom152p, 131:1133
macromolecular interactions in the p62 complex, rat, binding of nucleoporin p54 to the rod domain of p62, 128:251
nuclear pore complex assembly studied with biochemical assay for annulate lamellae formation, 129:1459
Nucleosomes, chromatin conformation and salt-induced compaction, three-dimensional structural information from cryoelectron microscopy, 131:1365
Nucleotide exchange factor, required for Ypt1 GTPase mediated protein transport, 130:1051
Nucleus, organization of chromatin in mega–base pair–sized loops arranged along random walk path in human G0/G1 interphase, 130:1239
Num1p, associates with mother cell cortex during S/G2 phase and affects microtubular functions, yeast, 131:1003
NUP82, is essential yeast nucleoporin required for poly(A)$^+$ RNA export, 130:1275
Nup116p, GLFG repetitive region of nucleoporin, interacts with Kap95p, essential yeast nuclear import factor, 131:1699
Nup120p
nuclear pore complex clustering and nuclear accumulation of poly(A)$^+$ RNA associated with mutation of *Saccharomyces cerevisiae RAT2/NUP120* gene, 131:1677
required for NPC distribution and mRNA transport, yeast nucleoporin, 131:1659
Nup82p protein, binds to fraction of Nsp1p, novel nuclear pore protein, 130:1263
Okadaic acid, protein phosphatase 1 regulates formation of endoplasmic reticulum in vitro, cytoplasmic dynein-driven, 128:879
Oleic acid-induced *Saccharomyces cerevisiae*, giant peroxisomes, lack of peroxisomal membrane protein Pmp27p, 128:509
Oligodendrocytic cells, DNA-binding protein from mouse brain stimulates transcription of myelin basic protein gene in, 130:1171
Oligodeoxynucleotides, Hst-1 antisense oligonucleotides block murine limb development, FGF-4, 130:997
Oligomerization, of Semliki Forest virus membrane protein subunits, 128:283
Oligosaccharyltransferase
loss of subunit of results in biased underglycosylation of acceptor substrates, Ost3p, *Saccharomyces cerevisiae*, 130:567
OST2 gene encodes 16-kD subunit of, yeast, highly conserved protein expressed in diverse eukaryotic organisms, 131:371
α subunit in *Saccharomyces cerevisiae*, vegetative growth, homologous to mammalian ribophorin I, 128:525
Oncoproteins, targeting of adenovirus E1A and E4-ORF3 proteins to nuclear matrix–associated PML bodies, 131:45
Oocyte development, stimulation of in *Xenopus*, inhibition of G-protein α_s subunit, component of plasma membrane and yolk platelet membranes, 130:275
Oocytes
activation and passage through metaphase/anaphase transition, clams, inhibitors of HMG-CoA reductase, 128:1145
GTP binding protein Rho in constitutive endocytosis in, *Xenopus laevis*, 130:1319
nuclear lamin isoprenylation in, *Xenopus*, lamin B3, uptake into nucleus, 129:17
Oogenesis, *Drosophila* development requires spectrin network formation, 128:71
orb genes, new genes in fission yeast cell morphogenesis and their role during cell cycle, 131:1529
Organelle positioning, controlled by microtubule polarity and dynamics, segregation, cytokinesis, trypanosome cell cycle, 128:1163
OST1 gene, α subunit of oligosaccharyltransferase complex, *Saccharomyces cerevisiae*, vegetative growth, homologous to mammalian ribophorin I, 128:525
OST2 gene, encodes 16-kD subunit of yeast oligosaccharyltransferase, highly conserved protein expressed in diverse eukaryotic organisms, 131:371
Ost3 protein, loss of subunit of results in biased underglycosylation of acceptor substrates, *Saccharomyces cerevisiae*, 130:567
Osteoblasts
constitutive expression of calreticulin in, inhibits mineralization, 131:1351

conversion of immortalized mesodermal progenitor cell towards, chondrogenic or adipogenic pathways, 130:1461
osteogenic differentiation of hypertrophic chondrocytes involves asymmetric cell divisions and apoptosis, 131:483
Osteogenic protein-1, binds to activin type II receptors, induction of activin-like effects, 130:217
Osteonectin, as major glutaminyl substrate, transglutaminase-catalyzed matrix cross-linking in differentiating cartilage, 129:881
Outer arm assembly, 78,000-M_r intermediate chain of *Chlamydomonas* outer arm dynein is microtubule-binding protein, 131:399
Outer arm dynein, is a WD-repeat protein required for arm assembly, 78,000 M_r intermediate chain of *Chlamydomonas*, 129:169
Ovary
cell mutant in Chinese hamster, non-endocytic uptake of fluorescent analogs of phosphatidylserine, cytosol acidification protocol, 128:793
of hydroxyurea-arrested Chinese hamster, dissociation of centrosome replication events from cycles of DNA synthesis, 130:105
Overgrown hematopoietic organs-31, tumor suppressor gene of *Drosophila*, *importin*-like protein accumulates in nucleus at onset of mitosis, 129:1473
Oxytricha, telomerase RNA localized in replication band and subnuclear organelles in hypotrichous ciliates, 130:243
p21$^{Cip1/WAF1}$, prolonged induction of p21$^{Cip1/WAF1}$/CDK2/PCNA complex by epidermal growth factor receptor activation mediates ligand-induced A431 cell growth inhibition, 131:235
p27^{KIP1}, inhibition of cyclin-dependent kinase triggers differentiation of mouse neuroblastoma cells, 131:227
p29, structure of defines novel synaptic vesicle protein, synaptogyrin, 131:1801
p85α, interactions with actin filaments and focal adhesion kinase, integrin-dependent translocation of phosphoinositide 3-kinase to cytoskeleton of thrombin-activated platelets, 129:831
p120, association with E-cadherin/catenin complexes, tyrosine kinase substrate, 128:949
p150^{Glued}, cytoplasmic dynein binds dynactin through direct interaction between intermediate chains and, 131:1507
p80 coilin, mutational analysis of, functional interaction between nucleolus and coiled bodies, 131:817
Pancreas
actin filament disassembly is final trigger for exocytosis, nonexcitable cells, 128:589
insulation of G-protein–coupled receptor on plasmalemmal surface of acinar cell of, 130:579
PAS8 gene, human peroxisomal targeting signal-1 receptor restores peroxisomal protein import in cells from patients with fatal peroxisomal disorders, 130:51
βpat-3, characterization of heterodimers of, integrin receptors in *Caenorhabditis elegans*, 129:1127
Paxillin, and focal adhesion kinase bind to peptides mimicking β integrin cytoplasmic domains, 130:1181
Pay32p, is intraperoxisomal component of matrix protein translocation machinery, *Yarrowia lipolytica*, 131:1453
PC12 cells
Ca^{2+} waves in, neurites, bidirectional receptor-oriented form of Ca^{2+} signaling, 129:797
similar subcellular localization and biochemical properties of cellubrevin and synaptobrevins in, 129:219
PEB1 gene, in *Saccharomyces cerevisiae*, hydrophilic intra-peroxisomal protein, WD repeat family, import of thiolase into peroxisomes, 129:65
Pemphigus vulgaris antigen, confers adhesive function on extracellular domain of E-cadherin, desmoglein 3, catenins, 128:939
Pendulin, is required for normal cell proliferation, *Drosophila* protein with cell cycle-dependent nuclear localization, 129:1491
Peptide libraries, peptide isolated from phage display libraries is mimic of RGD-binding site on integrins, 130:1189
Peptidyl transferase center, regions of nascent chains emerging from, NAC covers ribosome-associated nascent chains, 130:519
PER8 gene, encodes a peroxisomal integral membrane protein, *Hansenula polymorpha*, proliferation, 128:307
Perinucleolar compartment, contains several RNA polymerase III transcripts and polypyrimidine tract-binding protein hnRNP I, 129:1181
Peripheral nerve, E-cadherin–mediated adhesion in, Schwann cell architecture stabilized by autotypic adherens junctions, 129:189
Peripheral neurons
calsensin expressed in subset of, novel calcium-binding protein, leech, single axon tract, 129:1355
new neurotrophic factor for avian and mammalian, peripheral expression of GDNF, 130:137
Peripheral node addressin, sialomucin CD34 is major L-selectin ligand in human tonsil high endothelial venules, 131:261
Peritubular myoid cells, testicular development involves spatiotemporal control of PDGFs and PDGF receptors gene expression and action, 131:1105
Permeability
of gap junction channels in connexin-transfected HeLa cells, selective formation, 129:805
transfected connexin45 alters gap junction, cells expressing endogenous connexin43, 130:987
Peroxisomal disorders, human peroxisomal targeting signal-1 receptor restores peroxisomal protein import in cells from patients with, 130:51
Peroxisomal targeting signals, receptor restores peroxisomal protein import in cells from patients with fatal peroxisomal disorders, 130:51
Peroxisome biogenesis, *Hansenula polymorpha PER8* gene involved in proliferation, peroxisomal integral membrane protein, 128:307
Peroxisomes
alanine/glyoxylate aminotransferase 1 imported into, PTS1 translocation pathway, peroxisome-to-mitochondrion mistargeting of AGT in primary hyperoxaluria type 1, 131:95
giant ones in oleic acid-induced *Saccharomyces cerevisiae*, lack of peroxisomal membrane protein Pmp27p, 128:509
import of thiolase into, intra-peroxisomal protein is member of WD repeat family, *PEB1* in *Saccharomyces cerevisiae*, 129:65
Pay32p is intraperoxisomal component of matrix protein translocation machinery, *Yarrowia lipolytica*, 131:1453
proliferation of, promotion by Pmp27, 129:345
Phagocytosis, integrin β_3 cytoplasmic is necessary and sufficient for regulation of, $\alpha_5\beta_1$ phagocytosis, $\alpha_v\beta_3$ and integrin-associated protein, 130:745
Pheochromocytoma cells
biogenesis of synaptic vesicles in vitro, 130:1041
stimulation of neurite outgrowth in, PC12 cells, EGF and KCl depolarization, Ca^{2+}-independent phenomenon, 130:701
Pheromones
FAR1 required for oriented polarization of yeast cells in response to, mating, 131:863
Saccharomyces cerevisiae cells execute default pathway to select mate in absence of, 131:845
PHO genes, truncated form of Pho80 cyclin redirects Pho85 kinase to disrupt vacuole inheritance in *Saccharomyces cerevisiae*, 130:835
Phosphatase, truncated form of Pho80 cyclin redirects Pho85 kinase to disrupt vacuole inheritance in *Saccharomyces cerevisiae*, 130:835
Phosphatidylcholine, axonal synthesis of is required for normal axonal growth, rat sympathetic neurons, 128:913
Phosphatidylinositol 4,5-*bis*phosphate–sensitive casein kinase Iα associates with synaptic vesicles and phosphorylates subset of vesicle proteins, 130:711
Phosphatidylinositol 3-kinase
involvement of in vesicular transport to lysosomes, wortmannin causes mistargeting of procathepsin D, 130:797
role in regulation of β1 integrin activity by CD2 antigen, 131:1867
role in sorting and transport of lysosomal enzymes in mammalian cells, 130:781
Phosphatidylserine, non-endocytic uptake of fluorescent analogs of, Chinese hamster ovary cell mutant, cytosol acidification protocol, 128:793
Phosphoglycokeratins, in transgenic mice expressing a keratin 18 conserved arginine mutant, chronic hepatitis, hepatocyte fragility, 131:1303
Phosphoinositide 3-kinase, integrin-dependent translocation of, cytoskeleton of thrombin-activated platelets, interactions of p85α with actin filaments and focal adhesion kinase, 129:831
Phosphoinositol glycan, isolation of from caveolae and cytosol of insulin-stimulated cells, phosphooligosaccharide, 131:125
Phospholipase D, in cAMP signal transduction pathway activated during fibroblast contraction of collagen matrices, 130:1197
Phosphooligosaccharide, isolation of from caveolae and cytosol of insulin-stimulated cells, phosphoinositol glycan, 131:125
Phosphoprotein, of spindle assembly checkpoint in budding yeast, Madlp, 131:709
Phosphorylation
of agrin-induced tyrosine, immobilization of nicotinic acetylcholine receptors in mouse C2 myotubes, 131:441

binding of E-MAP-115 to microtubules is regulated by cell cycle–dependent, 131:1015
of connexin43 in Brefeldin A-treated rat mammary tumor cells, gap junction turnover, intracellular trafficking, 131:1193
differential targeting of protein kinase C and CaM kinase II signalings to vimentin, 131:1055
dual pathways of internalization of cholecystokinin receptor, 128:1029
of human keratin 18, polarized distribution of phosphorylated keratins in epithelial tissues, 131:1291
insulin stimulates, tyrosine, caveolin, 129:1523
interaction of nicotinic acetylocholine receptors with cytoskeleton, agrin-activated protein tyrosine kinase, 128:1121
kinetochore chemistry is sensitive to tension and may link mitotic forces to cell cycle checkpoint, 130:929
of myosin, myosin light chain kinase-regulated endothelial cell contraction, isometric tension, actin polymerization, 130:613
of myosin I isoforms in *Acanthamoeba castellanii*, quantification and localization, 130:591
of NFH subunits, overexpression of human NFM subunit in transgenic mice modifies level of endogenous NFL, 129:1629
protein phosphatase 2A is associated with microtubules, regulated during cell cycle, 128:1131
of a serine adjacent to nuclear localization signal, cell cycle–dependent nuclear import of v-Jun, 130:255
of tyrosine, regulates adhesions of Ras-transformed breast epithelia, 130:461
of tyrosine and cytoskeletal tension regulate release of fibroblast adhesions, 131:525
v-src kinase shifts cadherin-based cell adhesion from strong to weak state, β catenin not required for shift, 131:1839
Phosphotyrosine, synergistic role of intracellular Ca^{2+} concentration and, detachment of cultured cells from substratum induced by neutrophil-derived oxidant NH_2Cl, 131:509
Photoreceptor structure, in vivo requirement of protein prenylation for maintenance of retinal cytoarchitecture and, 130:431
Photoshock, mutational analysis of phototransduction pathway of *Chlamydomonas reinhardtii*, 131:427
Phototaxis, mutational analysis of phototransduction pathway of *Chlamydomonas reinhardtii*, 131:427
Phototransduction pathway, mutational analysis of, *Chlamydomonas reinhardtii*, 131:427
Phragmoplast, of green alga *Spirogyra* is functionally distinct from higher plant phragmoplast, 130:1359
PICKs, a perinuclear binding protein and substrate for protein kinase C, isolation by yeast two-hybrid system, 128:263
Pinocytosis
Dictyostelium myosin I double mutants exhibit conditional defects in, 131:1205
is induced in cells overexpressing temperature-sensitive mutant of dynamin, clathrin-independent, 131:69
PIP_2, CapG overexpression on agonist-induced motility and second messenger generation, 129:147
Placenta, ezrin oligomers are major cytoskeletal components of microvilli of, cortical morphogenesis, 131:1231
Plakoglobin, associated with β-catenin and α-catenin with vascular endothelial cadherin, molecular organization of endothelial cell to cell junctions, 129:203
Plasma membrane
barriers for lateral diffusion of transferrin receptor in, receptor dragging by laser tweezers, fence versus tether, 129:1559
calcium-regulated exocytosis required for resealing of, 131:1747
caveolin cycles between Golgi complex and caveolae of, microtubule-dependent and microtubule-independent steps, 131:1421
interaction of tau with neural, mediated by tau's amino-terminal projection domain, 131:1327
overexpression of wild-type and mutant ARF1 and ARF6, nonoverlapping membrane compartments, 128:1003
P-selectin must extend sufficient length from, mediate rolling of neutrophils, 131:1893
tyrosine kinase substrate eps15 is constitutively associated with plasma membrane adaptor AP-2, 131:1831
vesicle accumulation and exocytosis at sites of disruption of, 131:1737
Plasma membrane protein, *trans*-Golgi retention of, mutations in cytoplasmic domain of asialoglycoprotein receptor subunit H1 result in *trans*-Golgi retention, 130:285
Plasmalemma, insulation of G-protein–coupled receptor on surface of, pancreatic acinar cell, 130:579
Plasminogen activator receptor, is localized in caveolae, GPI-linked protein, urokinase, 129:335
Plasticity, in epithelial cell phenotype, modulation of expression of different cadherin cell adhesion molecules, 129:507
Plastid protein, NADPH:protochlorophyllide oxidoreductase, enzymatic product formation impairs chloroplast receptor–binding function and translocation competence, 129:299
Plastin, functional role of during entry of *Shigella flexneri* into HeLa cells, cytoskeletal rearrangements, 129:367
Platelet-derived growth factor-BB, chemotactic response to, role for Ras, 130:725
Platelet-derived growth factor-induced chemotaxis of human arterial smooth muscle cells, modulation of PDGF chemotactic signal transduction, sphingosine-1-phosphate inhibits, 130:193
Platelet-derived growth factors, testicular development involves spatiotemporal control of PDGFs and PDGF receptors gene expression and action, 131:1105
Pleurodeles waltl, zinc-binding domain is required for targeting maternal nuclear protein PwA33 to lampbrush chromosome loops, 131:563
PLK1, a human protein kinase implicated in mitotic spindle formation, cell cycle regulation of activity and subcellular localization of PLK1, 129:1617
pmal mutants, targeting of yeast plasma membrane $[H^+]$ATPase, gene *AST1* prevents mislocalization of mutant ATPase, vacuole, 128:39
PML protein, targeting of adenovirus E1A and E4-ORF3 proteins to nuclear matrix–associated PML bodies, 131:45
Pmp27, promotes peroxisomal proliferation, 129:345
Pmp27p protein, lacking in oleic acid-induced *Saccharomyces cerevisiae*, giant peroxisomes, 128:509
Pnut, fly division, 131:1
Polarity
anatomy of flagellar microtubules, seam, junctions, and lattice, 128:81
generating Na/K-ATPase, MDCK epithelial cells, 130:1105
Polarization
FAR1 required for oriented, yeast cells, response to mating pheromones, 131:863
chemokines regulate, adhesion receptor redistribution during lymphocyte interaction with endothelium and extracellular matrix, involvement of cAMP signaling pathway, 131:495
Polarized cell growth, during cortical actin cytoskeleton assembly, budding yeast, 128:599
Polarized growth, requires an essential myosin I, *myoA* of *Aspergillus nidulans*, secretion, 128:577
Polarized orientation, transport of dendritic microtubules establishes nonuniform, 130:93
Polarized trafficking, is regulated by two independent signals, β-amyloid precursor protein, proteolytic products in MDCK cells, 128:537
Poly(A)$^+$ RNA
nuclear pore complex clustering and nuclear accumulation of, mutation of *Saccharomyces cerevisiae RAT2/NUP120* gene, 131:1677
structural arrangements of specific pre-mRNA transcription and splicing with SC-35 domains, nonrandom gene organization, 131:1635
Polycomplex assembly, Zip1-induced changes in, synaptonemal complex structure, 128:455
Polymerase II large subunit, transcription-dependent redistribution of, discrete nuclear domains, 129:287
Polymerase III, perinucleolar compartment contains several RNA transcripts of, polypyrimidine tract-binding protein hnRNP I, 129:1181
Polymeric immunoglobulin receptor, intracellular routing of wild-type and mutated, hippocampal neurons in culture, 130:1447
Polymerization
membrane/microtubule tip attachment complexes allow assembly dynamics of plus ends to push and pull membranes into tubulovesicular networks in interphase *Xenopus* egg extracts, 130:1161
rigidity of microtubules is increased by stabilizing agents, 130:909
specific NH_2-terminal sequence Ac-EEED of α-smooth muscle actin plays role in, in vitro and in vivo, 130:887
γ-tubulin can nucleate microtubule assembly and self-assemble into novel tubular structures in mammalian cells, 130:1137
Polypyrimidine tract-binding protein hnRNP I, perinucleolar compartment contains, several RNA polymerase III transcripts, 129:1181
Polytene chromosomes, three-dimensional structural dissection of, *Drosophila*, 131:279
Pom152p
complementation with vertebrate homologue Nup155p and functional interactions with yeast nuclear pore–membrane protein yeast nucleoporins Nup170p and Nup157p, 131:1133

Ponticulin, plays role in positional stabilization of pseudopods, 131:1495
Pore membrane protein 152, isolation and characterization of nuclear envelopes from *Saccharomyces*, 131:19
Postmitotic cell spreading, myosin is involved in, 131:179
Potoroo tridactylis kidney, myosin is involved in postmitotic cell spreading, 131:179
pp60$^{c\text{-}src}$, is positive regulator of growth factor-induced cell scattering in rat bladder carcinoma cell line, 131:761
PR65, differential methylation and altered conformation of cytoplasmic and nuclear forms of protein phosphatase 2A during cell cycle progression, 129:397
pRB proteins, involvement in TGFβ-dependent epithelial cell hypertrophy, 129:245
Pre-mRNA, structural arrangements of specific pre-mRNA transcription and splicing with SC-35 domains, nonrandom gene organization, 131:1635
Presynaptic terminals, synapsin I deficiency results in structural change in, murine nervous system, 131:1789
Prevacuolar compartment, *VPS27* controls vacuolar and endocytic traffic through, *Saccharomyces cerevisiae*, 131:603
Primary hyperoxaluria type 1, peroxisome-to-mitochondrion mistargeting of AGT in, alanine/glyoxylate aminotransferase 1 imported into peroxisomes via PTS1 translocation pathway, 131:95
Primate, mapping of homotypic binding sites in CD31, role of CD31 adhesion in formation of interendothelial cell contacts, 128:1229
Prion protein, COOH-terminal targeting sequence of, cholesterol depletion and modification, inhibition of scrapie isoform, 129:121
Pro-α1(I) collagen, *cis*-acting DNA elements of promoter of, mouse, direct expression of reporter genes to different type I collagen-producing cells in transgenic mice, 129:1421
Procathepsin D, wortmannin causes mistargeting of, phosphatidylinositol 3-kinase involved in vesicular transport to lysosomes, 130:797
Procollagen VII, is processed to collagen VII through removal of NC-2 domain, 131:551
Proenkephalin, is nuclear protein responsive to growth arrest and differentiation signals, 130:1251
Progesterone
  and glucocorticoid inhibit involution and programmed cell death in mouse mammary gland, 131:1095
  stimulation of *Xenopus* oocyte maturation by inhibition of G-protein α_s subunit, component of plasma membrane and yolk platelet membranes, 130:275
Programmed cell death
  adhesion regulated, in intestinal epithelial cells induced by three-dimensional growth conditions, suppression by mutant c-H-*ras* oncogene expression, 131:1587
  p53 activation of apoptosis in mammary epithelial cells, survival function of EGF and insulin, 128:1185
  role of cadherin in regulation of, mouse intestinal epithelium, roles of adhesion and maintenance of differentiation, 129:489
  viral proteins protect sympathetic neurons from, E1B19K, p35, NGF deprivation, 128:201
Projectin, contains functional kinase domains, synchronous and asynchronous muscle isoforms, Drosophila bent locus product, 128:393
Proliferating cell nuclear antigen, prolonged induction of p21$^{Cip1/WAF1}$/CDK2/PCNA complex by epidermal growth factor receptor activation mediates ligand-induced A431 cell growth inhibition, 131:235
Proliferation
  calcitonin gene-related protein promotes Schwann cell, 129:789
  a peroxisomal integral membrane protein involved in, *Hansenula polymorpha PER8* gene, 128:307
proPC2, 7B2 facilitates maturation of, neuroendocrine cells, expression of enzymatic activity, 129:1641
Protamine-1, Spnr, murine RNA-binding protein that is localized to cytoplasmic microtubules, 129:1023
Protein
  4.1, mechanochemistry of, spectrin–actin-binding domain, ternary complex interactions, membrane binding, network integration, structural strengthening, 130:897
  4.1, slow dissociation of spectrin-protein 4.1-actin complex, posttranslational modification of β-actin, sickled cells, 128:805
  ABP-120, genetic deletion of alters actin filaments, *Dictyostelium* pseudopods, 128:819
  7B2, facilitates maturation of proPC2 in neuroendocrine cells, expression of enzymatic activity, 129:1641
  FI1, binding with tenascin-R polypeptide, functional domains of tenascin-R polypeptide, enhancement of FI1-mediated neurite outgrowth by tenascin-R, cell attachment site, 130:473
  GP75, identification of signals for sorting of, human brown locus protein, intracellular sorting and targeting of melanosomal membrane proteins, 130:807
  p21^{CIP1}, DNA replication requires cyclin E and is blocked by, 130:755
  p35, protects sympathetic neurons from cell death, E1B19K, NGF deprivation, 128:201
  p53, activates apoptosis in mammary epithelial cells, survival function of EGF and insulin, 128:1185
  p62, in nucleoporin complex of rat nuclear pores, binding of nucleoporin p54 to the rod domain of p62, 128:251
  p62, oligomerization reaction of Semliki Forest virus membrane protein subunits, 128:283
  p75, regulation of nerve growth factor receptor gene expression in sympathetic neurons, 130:1435
  p97, sequence and characterization of, cytoplasmic nuclear protein, 130:265
  p97, a vertebrate GLFG nuclear pore protein, reconstituted nuclei, defective in nuclear growth and replication, 128:721
  p100, a p120-related protein, p120, cadherin/catenin complex, 130:369
  p120, p120-related protein, cadherin/catenin complex, 130:369
  p120RasGAP, c-Src regulates rearrangement of, actin cytoskeleton, p190RhoGAP, epidermal growth factor stimulation, 130:355
  p190RhoGAP, c-Src regulates rearrangement of, actin cytoskeleton, p120RasGAP, epidermal growth factor stimulation, 130:355
Protein anchoring, yeast Gaalp is required for, completed GPI anchor, 129:629
Protein folding
  of carboxypeptidase Y in yeast, BiP/Kar2p serves as molecular chaperone, 130:41
  of thyroglobulin in endoplasmic reticulum, calnexin and BiP act as sequential molecular chaperones, 128:29
Protein import
  a cytosolic factor for, NTF2 interacts with nuclear pore complex protein p62, 129:925
  GTP hydrolysis by Ran occurs at nuclear pore complex in early step of, 131:571
  Mas37p is a novel receptor subunit for, mitochondria, 129:25
Protein kinase, implicated in mitotic spindle formation, human, cell cycle regulation of activity and subcellular localization of PLK1, 129:1617
Protein kinase C
  differential targeting of CaM kinase II and, signalings to vimentin, 131:1055
  a perinuclear binding protein and substrate for, PICK1, isolation by yeast two-hybrid system, 128:263
Protein kinase C-α, hormonal regulation of caveolae internalization, 131:929
Protein phosphatase 1, regulates formation of endoplasmic reticulum in vitro, cytoplasmic dynein-driven, 128:879
Protein phosphatase 2A
  is associated with microtubules, regulated during cell cycle, 128:1131
  differential methylation and altered conformation of cytoplasmic and nuclear forms of, cell cycle progression, 129:397
Protein prenylation, for maintenance of retinal cytoarchitecture and photoreceptor structure, in vivo, 130:431
Protein sorting
  and targeting of melanosomal membrane proteins, intracellular sorting, sorting of human brown locus protein, GP75, 130:807
  to vacuole in yeast, vesicle-mediated protein transport, regulatory interactions between Vps15 protein kinase and Vps34 PtdIns 3-kinase, 129:321
  Ypt1 GTPase is essential for first two steps in yeast secretory pathway, 131:583
Protein targeting
  autocrine motility factor receptor is marker for distinct membranous tubular organelle, 129:459
  functional characterization of 180-kD ribosome receptor in vivo, 130:29
  in vitro reconstitution of cytoplasm to vacuole, yeast, 131:1727
  of integral membrane to inner nuclear membrane, signals and structural features, 130:15
  isolation of yeast mutants in cytoplasm to vacuole, 131:591
Protein translocation
  interaction between BiP and Sec63p required for, ER of *Saccharomyces cerevisiae*, 131:1163
  Pay32p is intraperoxisomal component of matrix, *Yarrowia lipolytica*, 131:1453
  Saclp mediates adenosine triphosphate transport into yeast endoplasmic reticulum that is required for, 131:1377
Protein transport
  anterograde and retrograde traffic between rough endoplasmic reticulum and Golgi complex, 131:1387
  from late endosomes to lysosomes depends on vacuolar proton pump, sorting of integral membrane proteins in endosomes, 130:821

human peroxisomal targeting signal-1 receptor restores peroxisomal, patients with fatal peroxisomal disorders, 130:51
nucleotide exchange factor required for Ypt1 GTPase mediated, 130:1051
Rnalp is required for nuclear import, Ran/TC4 GTPase activating protein, 130:1017
role for phosphatidylinositol 3-kinase in sorting and transport of lysosomal enzymes in mammalian cells, 130:781
selective reentry of recycling cell surface glycoproteins to biosynthetic pathway in human hepatocarcinoma HepG2 cells, 130:537
sequential coupling between CopII and CopI vesicle coats in endoplasmic reticulum to Golgi transport, 131:875
Protein tyrosine kinase, regulation by agrin-activated, interaction of nicotinic acetylocholine receptors with cytoskeleton, 128:1121
Protein tyrosine phosphatase, COOH-terminal sequence motifs target, T cell, ER and nucleus, 131:631
Protein zero, triggers epithelial reversion in host carcinoma cells, nervous system adhesion molecule, 131:465
14-3-3 Proteins, effects on priming and targeting of regulated exocytosis, α-SNAP, calmodulin, 130:1063
Proteoglycan, hepatocyte growth factor/scatter factor modulates cell motility, proliferation, and proteoglycan synthesis of chondrocytes, 129:1411
Proteoglycan ligand, interacts with N-acetylgalactosaminylphosphotransferase, retina cell surface, inhibition of cadherin-mediated adhesion, 129:1391
Proteoglycans, of lymphocyte homing receptor CD44, alternatively spliced variants containing v3 exon, 128:673
Proteolysis
ARIA released from extracellular matrix through cleavage of a heparin-binding domain, 130:127
NAC covers ribosome-associated nascent chains, regions of nascent chains emerging from peptidyl transferase center, 130:519
Proteolytic cleavage, of Neuron–glia cell adhesion molecule, functional analysis of posttranslational cleavage products, 130:733
Proteolytically generated trypomastigote factor, trypanosome-soluble factor induces IP_3 formation, intracellular Ca^{2+} mobilization and microfilament rearrangement in host cells, 129:1263
P-selectin
must extend sufficient length from plasma membrane to mediate rolling of neutrophils, 131:1893
rolling of human neutrophils on, glycoprotein ligand-1, 128:661
P-selectin glycoprotein ligand-1, P-selectin must extend sufficient length from plasma membrane to mediate rolling of neutrophils, 131:1893
Pseudomonas, cells with altered expression of low-density lipoprotein receptor–related protein in, exotoxin-mediated selection, 129:1533
Pseudopods
in *Dictyostelium*, genetic deletion of ABP-120, actin filaments, 128:819
ponticillin plays role in positional stabilization of, 131:1495
Pur α, DNA-binding protein from mouse brain stimulates transcription of myelin basic protein gene in oligodendrocytic cells, 130:1171
PwA33, zinc-binding domain is required for targeting, maternal nuclear protein, lampbrush chromosome loops, 131:563
Quail, activation of v-Src disrupts sarcomeres in myotubes of, maintenance of differentiated state in skeletal muscle, 130:871
Quaking mice, endocytic depletion of L-MAG from CNS myelin in, 131:1811
Rab7, is important regulator of late endocytic membrane traffic, 131:1435
Rabbit, immunolocalization of sarcolemmal dihydropyridine receptor and sarcoplasmic reticular triadin and ryanodine receptor in, ventricle and atrium, 129:673
rac, assembly of integrin adhesion complexes requires extracellular matrix and intracellular rho/rac GTPases, 131:1857
Rac1, and CDC42 control different actin-dependent processes, *Drosophila* wing disc epithelium, 131:151
Radial growth, increasing neurofilament-M expression inhibits, reduces axonal NF-H, results in neurofilamentous accumulation in motor neurons, 130:1413
Radixin, molecular dissection of, distinct and interdependent functions of amino- and carboxy-terminal domains, 129:1007
Ran, GTP hydrolysis by, occurs at nuclear pore complex in early step of protein import, 131:571
Ran/TC4 GTPase activating protein, Rnalp is required for nuclear import, 130:1017
Ras, role of in chemotactic response to PDGF-BB, 130:725
ras oncogene, suppression by mutant c-H-*ras* oncogene expression, programmed cell death in intestinal epithelial cells induced by three-dimensional growth conditions, 131:1587
Rat
axonal growth in sympathetic neurons in, axonal synthesis of phosphatidylcholine, 128:913
cell size regulation controls cellular RNA accumulation, transcription factors Oct1 and NF-Y, liver-enriched transcription factor DBP, 128:467
differential localization and role of calsequestrin, differentiated myoblasts, 128:341
induction of nestin contributes to generation of glial scar tissue after CNS injury, 131:453
LAR tyrosine phosphatase receptor, alternative splicing is preferential to nervous system, coordinated cell growth, generates isoforms containing CAG repeats, 128:415
local neurotrophic repression of gene transcripts encoding fetal AChRs at neuromuscular synapses in, 130:949
myosin I from, SH3 domain, Con A–inducible F-actin–rich structures at cell–cell contacts, 129:819
NGF-stimulated retrograde transport of trkA in nervous system of, 130:149
nucleoporin p62 complex in, binding of nucleoporin p54 to the rod domain of p62, 128:251
peripheral expression of GDNF, new neurotrophic factor for avian and mammalian peripheral neurons, 130:137
reassembly of Golgi stacks from mitotic Golgi fragments in cell-free system, 129:605
targeting of lgp120 (lamp-I) in, cytoplasmic determinants, lysosomal sorting, endocytosis, MDCK cells, 128:321
RAT2 gene, nuclear pore complex clustering and nuclear accumulation of poly(A)$^+$ RNA associated with mutation of *Saccharomyces cerevisiae RAT2/NUP120* gene, 131:1677
rbSEC1, localizes with syntaxin 1 and SNAP-25, axon, 129:105
Receptor chains, intracellular localization and fate of, endocytosis of interleukin 2 receptors in human T lymphocytes, 129:55
Receptor protein tyrosine phosphatase μ, cell surface expression of, regulated by cell–cell contact, 131:251
Receptor tyrosine kinase, involved in angiogenesis, endothelial, 129:895
Red blood cells, GPI-anchored influenza hemagglutinin induces hemifusion to planar bilayer membranes and, 131:679
Repeat domain, *Ank3* expressed in alternatively spliced forms including forms that lack, widely distributed new member of ankyrin gene family and major ankyrin in kidney, 130:313
Repressor Activator Protein 1, carboxy termini of Sir4 and Rap1 affect Sir3 localization, multicomponent complex required for yeast telomeric silencing, 129:909
ret1-1 mutant, Golgi-localization of yeast Emp47p depends on di-lysine motif but not affected by, α-COP, 131:895
Retention motifs, steric masking of dilysine endoplasmic reticulum, assembly of human high affinity receptor for immunoglobulin E, 129:971
Retina
E587 glycoprotein participates in axonal fasciculation and age-related order of ganglion cell axons in, goldfish, L1 family of cell adhesion molecules, 130:969
in vivo requirement of protein prenylation for maintenance of cytoarchitecture of, photoreceptor structure, 130:431
N-acetylgalactosaminylphosphotransferase in cell surface of, interaction with endogenous proteoglycan ligand, inhibition of cadherin-mediated adhesion, 129:1391
Retinoblastoma gene product, inhibition of cyclin-dependent kinase triggers differentiation of mouse neuroblastoma cells, 131:227
Retinoblastoma protein, cells differentiating into neuroectoderm undergo apoptosis in absence of, 129:779
Retinoic acid
expression of *Notch 1*, *2*, and *3* regulated by epithelial-mesenchymal interactions and, developing mouse tooth, determination of ameloblast cell fate, 130:407
midkine is regulated by, heparin-binding growth/differentiation factor, epithelial–mesenchymal interactions in developing mouse tooth, cell proliferation and morphogenesis, 129:267
regulation of muscle-specific transgene by, 129:1345
Retinoic acid receptor α, targeting of adenovirus E1A and E4-ORF3 proteins to nuclear matrix–associated PML bodies, 131:45
Retrograde transport
capacity to retrieve escaped ER proteins extends to *trans*-most cisterna of Golgi stack, 129:309
of trkA in mammalian nervous system, NGF-stimulated, 130:149

RGD-binding motif, peptide isolated from phage display libraries is mimic of, integrins, 130:1189
Rhinovirus serotype 2, different behavior of adenovirus and, virus-mediated release of endosomal content in vitro, 131:111
rho, assembly of integrin adhesion complexes requires extracellular matrix and intracellular rho/rac GTPases, 131:1857
RhoA, in constitutive endocytosis in *Xenopus laevis* oocytes, GTP binding protein, 130:1319
Ribonucleic acid trafficking 7 gene, causes rapid cessation of mRNA export and reversible clustering of nuclear pore complexes, conditional allele of yeast nucleoporin *RAT7/NUP159*, 129:939
Ribophorin I, α subunit of oligosaccharyltransferase complex is homologous to, *Saccharomyces cerevisiae*, vegetative growth, 128:525
Ribosome binding domain, functional characterization of 180-kD ribosome receptor in vivo, 130:29
Ribosome receptor, functional characterization of, in vivo, 130:29
RNA, cell size regulation controls cellular accumulation of, transcription factors Oct1 and NF-Y, liver-enriched transcription factor DBP, 128:467
RNA binding domains, nuclear localization domain in hnRNP A1 protein, 129:551
RNA cytochemistry, dynamic localization of RNase MRP RNA in nucleolus observed by, living cells, 131:1649
RNA export, NUP82 is essential yeast nucleoporin required for, poly(A)$^+$ RNA, 130:1275
RNA transport, novel nuclear pore protein Nup82p binds to fraction of Nsp1p, 130:1263
RNA-binding protein, murine Spnr is localized to cytoplasmic microtubules, 129:1023
Rna1p protein, is required for nuclear import, Ran/TC4 GTPase activating protein, 130:1017
RNase MRP, dynamic localization of, nucleolus, fluorescent RNA cytochemistry, living cells, 131:1649
RNP particle, structural interaction between nuclear pore complex and, translocation, 129:1205
Root tips, cytokinesis in tobacco BY-2 cells and, cell plate formation in higher plants, 130:1345
Rough endoplasmic reticulum, anterograde and retrograde traffic between Golgi complex and, 131:1387
R-Ras, promotes apoptosis caused by growth factor deprivation via Bcl-2 suppressible mechanism, 129:1103
rRNA, visualization of bipartite domains, nuclear spreads, 128:15
rRNA synthesis, inhibition of during mitosis, 129:561
Ryanodine receptors
  expressed in murine brain and peripheral tissues, calcium channel genes, 128:893
  immunolocalization of, sarcolemmal dihydropyridine receptor, sarcoplasmic reticular triadin, rabbit ventricle and atrium, 129:673
  molecular architecture of membranes involved in excitation–contraction coupling of cardiac muscle, 129:659
Saccharomyces, isolation and characterization of nuclear envelopes from, 131:19
Saccharomyces cerevisiae
  actin filaments are unstable in absence of capping protein and fimbrin in, 131:1483
  cell biological perspective on genome research, 131:1361
  cell cycle checkpoint monitors cell morphogenesis in, 129:739
  cells of execute default pathway to select mate in absence of pheromone gradients, 131:845
  CEP3 encodes a centromere protein in, 128:749
  cross-linking of α-agglutinin and β1,6-glucan in cell wall of, glycosyl phosphatidylinositol-dependent, 128:333
  Drosophila cell cycle gene *fizzy* has homology to *CDC20* gene of, normal degradation of cyclins A and B during mitosis, 129:725
  FAR1 required for oriented polarization of cells of, response to mating pheromones, 131:863
  functional characterization of 180-kD ribosome receptor in vivo, 130:29
  Fus2 localizes near site of cell fusion and is required for cell fusion and nuclear alignment during zygote formation, 130:1283
  giant peroxisomes in, oleic acid-induced, lack of peroxisomal membrane protein Pmp27p, 128:509
  Golgi-localization of Emp47p of, depends on di-lysine motif but not affected by *ret1-1* mutation in α-COP, 131:895
  human SEC13Rp functions in, transport vesicles, endoplasmic reticulum, 128:769
  interaction between BiP and Sec63p required for protein translocation into ER of, 131:1163
  isolation of mutants in cytoplasm to vacuole protein targeting pathway in, 131:591
  kinesin- and dynein-related proteins in, anaphase chromosome segregation, 128:617
  localization and targeting of Kre2p/Mnt1p α1,2-mannosyltransferase to *medial*-Golgi compartment in, 131:913
  loss of subunit of oligosaccharyltransferase in, biased underglycosylation of acceptor substrates, Ost3p, 130:567
  manganese supports cell-cycle progression in place of calcium in, 131:1025
  Mas37p, a novel receptor subunit for protein import into mitochondria, 129:25
  nuclear pore complex clustering and nuclear accumulation of poly(A)$^+$ RNA associated with mutation of *RAT2/NUP120* gene in, 131:1677
  nucleoporin *RAT7/NUP159* in, conditional allele, rapid cessation of mRNA export and reversible clustering of nuclear pore complexes, 129:939
  Num1p associates with mother cell cortex during S/G2 phase and affects microtubular functions in, 131:1003
  OST2 gene encodes 16-kD subunit of oligosaccharyltransferase of, highly conserved protein expressed in diverse eukaryotic organisms, 131:371
  parallel secretory pathways to cell surface in, 131:297
  patterns of bud-site selection in, 129:751
  PEB1 in, hydrophilic intra-peroxisomal protein, WD repeat family, import of thiolase into peroxisomes, 129:65
  Pho80 cyclin redirects Pho85 kinase to disrupt vacuole inheritance in, 130:835
  Pmp27 promotes peroxisomal proliferation, 129:345
  protein sorting to vacuole in, vesicle-mediated protein transport, regulatory interactions between Vps15 protein kinase and Vps34 PtdIns 3-kinase, 129:321
  role of Bud3p in producing axial budding pattern of, 129:767
  Sec6, Sec8, and Sec15 are components of multisubunit complex which localizes to small bud tips in, 130:299
  SED4 encodes endoplasmic reticulum protein in, binds Sec16p and participates in vesicle formation, 131:325
  six complementation classes involved in biosynthesis of glycosylphosphatidyl-inositol anchors in, 130:1333
  spindle dynamics and cell cycle regulation of dynein in, 130:687
  α subunit of oligosaccharyltransferase complex in, vegetative growth, homologous to mammalian ribophorin I, 128:525
  targeting of [H$^+$]ATPase of plasma membrane of, gene *AST1* prevents mislocalization of mutant ATPase, vacuole, 128:39
  three-dimensional ultrastructural analysis of mitotic spindle of, 129:1601
  tropomyosin is essential in, *TPM1* and *TPM2* products, 128:383
  γ-tubulin gene essential for cell growth and microtubule organization in, 131:1775
  two microtubule-associated proteins required for anaphase spindle movement in, 130:1373
  vps1 mutant cells in, Golgi and vacuolar membrane proteins, plasma membrane, 129:35
  VPS27 controls vacuolar and endocytic traffic through prevacuolar compartment in, 131:603
Sac1p, mediates adenosine troiphosphate transport into yeast endoplasmic reticulum that is required for protein translocation, 131:1377
sad1$^+$ gene, associates with fission yeast spindle body pole and is essential for viability, product of spindle formation gene, 129:1033
Salmonella typhimurium
  surface attachment of, to intestinal epithelia imprints subepithelial matrix with gradients chemotactic for neutrophils, 131:1599
  targeting of, vesicles containing lysosomal membrane glycoproteins, mannose 6-phosphate receptors, 129:81
Salt-induced compaction, chromatin conformation, three-dimensional structural information from cryoelectron microscopy, 131:1365
Sarcolemmal dihydropyridine receptor, immunolocalization of, sarcoplasmic reticular triadin, ryanodine receptor, rabbit ventricle and atrium, 129:673
Sarcoma S180 cells, migratory behavior of, fibronectin-specific integrin expression pattern, in vitro and in embryonic environment, 128:699
Sarcomeres
  activation of v-Src disrupts, quail myotubes, maintenance of differentiated state in skeletal muscle, 130:871
  inhibition of CapZ during myofibrillogenesis, alteration of assembly of actin filaments, 128:61
Sarcoplasmic reticular triadin, immunolocalization of, sarcolemmal dihydropyridine receptor, ryanodine receptor, rabbit ventricle and atrium, 129:673

SC-35 domains, structural arrangements of specific pre-mRNA transcription and splicing with, nonrandom gene organization, 131:1635
SC35 splicing protein, transcription-dependent redistribution of large subunit of RNA polymerase II to discrete nuclear domains, 129:287
Schizosaccharomyces pombe
cdc4$^+$ gene in, encodes novel EF-hand protein essential for cytokinesis, 130:651
cell morphogenesis in, new genes and their role during cell cycle, 131:1529
centromeric chromatin structure in, novel *cis*-acting centromeric DNA element, 128:445
degradation of HMG-CoA reductase-induced membranes in, fission yeast, 131:81
Schwann cells
calcitonin gene-related protein promotes proliferation of, 129:789
interactions with axons regulated by transforming growth factor-β1, 129:443
stabilized by autotypic adherens junctions, E-cadherin–mediated adhesion in peripheral nerve, 129:189
Sciatic nerve
brain-derived neurotrophic factor promoter regions, tissue-specific, axotomy-, and neuronal activity-induced expression, transgenic mice, 128:185
NGF-stimulated retrograde transport of trkA, mammalian nervous system, 130:149
Scj1p, a yeast DnaJ homologue, functions in endoplasmic reticulum with BiP/Kar2p, conserved domain that specifies interactions with Hsp70s, 129:979
Scrapie isoform, inhibited by cholesterol depletion and modification, COOH-terminal targeting sequence of prion protein, 129:121
Scruin, sequence and domain organization of, actin–cross-linking protein, acrosomal process of *Limulus* sperm, 128:51
Sea urchin
calcium-regulated exocytosis required for cell membrane resealing, 131:1747
membrane retrieval into large vesicles after exocytosis in eggs of, 131:1183
nuclear envelope breakdown is under nuclear not cytoplasmic control in zygotes of, 129:1447
SEC genes, Sec6, Sec8, and Sec15 are components of multisubunit complex which localizes to small bud tips in *Saccharomyces cerevisiae*, 130:299
SEC16 gene, encodes multidomain vesicle coat protein that interacts with Sec23p, yeast, 131:311
Sec16p, *SED4* encodes yeast endoplasmic reticulum protein that binds, participates in vesicle formation, 131:325
Sec23p, yeast *SEC16* gene encodes multidomain vesicle coat protein that interacts with, 131:311
Sec61p, interact with nascent chain, stage- and ribosome-specific alterations, translocation across ER membrane, 129:957
Sec63p, and BiP interaction required for protein translocation into ER of *Saccharomyces cerevisiae*, 131:1163
Secretion, requires an essential myosin I, *myoA* of *Aspergillus nidulans*, polarized growth, 128:577
Secretory mutants, Myo2 in vesicular transport, yeast class V myosin, 128:1055
Secretory pathway
role for phosphatidylinositol 3-kinase in sorting and transport of lysosomal enzymes in mammalian cells, 130:781
selective reentry of recycling cell surface glycoproteins to biosynthetic pathway in human hepatocarcinoma HepG2 cells, 130:537
Ypt1 GTPase is essential for first two steps in, yeast, 131:583
Secretory vesicles, parallel secretory pathways to cell surface in yeast, 131:297
SEC13Rp protein, functions in yeast, transport vesicles, endoplasmic reticulum, 128:769
SED4, encodes yeast endoplasmic reticulum protein that binds Sec16p and participates in vesicle formation, 131:325
Semliki Forest virus, oligomerization reaction of, membrane protein subunits, 128:283
SEP1, fly division, 131:1
Sequestration, of acetylated LDL and cholesterol crystals, human monocyte-derived macrophages, 129:133
Serine, phosphorylation of, adjacent to nuclear localization signal, cell cycle–dependent nuclear import of v-Jun, 130:255
Serine proteinases, non-oxidative mechanism by which neutrophils focus and preserve catalytic activity of, cell surface–bound elastase and cathepsin G on human neutrophils, 131:775
Sertoli cells, testicular development involves spatiotemporal control of PDGFs and PDGF receptors gene expression and action, 131:1105
SET protein, interacts with B-type cyclins, NAP/SET family of proteins, 130:661
S/G2 phase, yeast Num1p associates with mother cell cortex during, affects microtubular functions, 131:1003
Shigella flexneri, entry into HeLa cells, cytoskeletal rearrangements and functional role of T-plastin, 129:367
Sickle cells, slow dissociation of spectrin-protein 4.1-actin complex of, posttranslational modification of β-actin, 128:805
Signal recognition particle, receptor of β subunit, anchoring of α subunit to endoplasmic reticulum, transmembrane and peripheral membrane GTPases, 128:273
Signal transduction
density-sensing factor regulates, *Dictyostelium*, 129:1251
integrin β_3 cytoplasmic tail is necessary and sufficient for regulation of $\alpha_5\beta_1$ phagocytosis by $\alpha_v\beta_3$ and integrin-associated protein, 130:745
modulation of PDGF chemotactic, sphingosine-1-phosphate inhibits PDGF-induced chemotaxis of human arterial smooth muscle cells, 130:193
molecular hierarchies of cytoskeletal and signaling molecules, integrin function, 131:791
mutational analysis of phototransduction pathway of *Chlamydomonas reinhardtii*, 131:427
phospholipase D in cAMP, activated during fibroblast contraction of collagen matrices, 130:1197
PICK1, a perinuclear binding protein and substrate for protein kinase C, isolation by yeast two-hybrid system, 128:263
Signaling
of calcium in human endothelial cells, lymphocyte adhesion, 128:969
evidence for intracellular, embryonic axis induction, Armadillo repeat domain of β-catenin, 128:959
Silent Information Regulatory proteins 3 and 4, carboxy termini of Sir4 and Rap1 affect Sir3 localization, multicomponent complex required for yeast telomeric silencing, 129:909
Simian virus 40 large tumor antigen, causes immortalization in mouse chondrocytes, type X collagen gene expression, mouse, temperature-sensitive, 128:239
Simian virus 40 T antigen, expression causes abnormal skeletal development, human COL2A1-directed expression, transgenic and chimeric mice, 128:223
Sindbis virus, thiol agents and Bcl-2 identify alphavirus-induced apoptotic pathway that requires activation of transcription factor NF-kappa B, 131:1149
Sisyphus cycle, a coordinated, continual assembly of half-desmosomal structures in absence of cell contacts and their frustrated endocytosis, 131:745
Skeletal development, abnormality caused by human COL2A1-directed SV40 T antigen expression, transgenic and chimeric mice, 128:223
Skeletal muscle
maintenance of differentiated state in, activation of v-Src disrupts sarcomeres in quail myotubes, 130:871
myosin light chain 3F regulatory sequences confer expression in, cardiac muscle, transgenic mice, 129:383
Skin, procollagen VII is processed to collagen VII through removal of NC-2 domain, 131:551
α-Smooth muscle actin, specific NH_2-terminal sequence Ac-EEED of, polymerization in vitro and in vivo, 130:887
Smooth muscle cells
low density lipoprotein receptor–related protein as an endocytic receptor for thrombospondin-1, 129:1403
sphingosine-1-phosphate inhibits PDGF-induced chemotaxis of, human arterial, modulation of PDGF chemotactic signal transduction, 130:193
α-SNAP, effects on priming and targeting of regulated exocytosis, 14-3-3 proteins, calmodulin, 130:1063
SNAP-25
expressed in Islets of Langerhans, insulin release, 128:1019
present in organelles, t-SNAREs, syntaxin 1, synaptic vesicle recycling, 128:637
rbSEC1A and B colocalize with, syntaxin 1, axon, 129:105
Sorting
cytoplasmic determinants in lysosomal, endocytosis, targeting of rat lgp120 (lamp-1) in MDCK cells, 128:321
determinant in cytoplasmic tail of cation-dependent mannose 6-phosphate receptor prevents trafficking to lysosomes, 130:1297
evidence for nonvectorial, retrograde transferrin, early endosomes of HEp2 cells, 128:549
molecular size–fractionation during endocytosis in macrophages, 129:989
oligomerized transferrin receptors are selectively retained by, lumenal sorting signal in long-lived endocytic recycling compartment, 129:1509
is regulated by two independent signals, β-amyloid precursor protein, proteolytic products in MDCK cells, 128:537
of vacuolar signals, sensitivity to wortmannin, presence of distinct sorting machineries in tobacco cells, 130:1307

Speckle domains, discrete nuclear domains, transcription-dependent redistribution of large subunit of RNA polymerase II, 129:287
Spectrin
binding with actin, mechanochemistry of protein 4.1, ternary complex interactions, membrane binding, network integration, structural strengthening, 130:897
disrupts epithelial cell morphology, functional domains of beta$_G$-spectrin, 128:1069
Drosophila development requires, network formation, 128:71
slow dissociation of spectrin-protein 4.1-actin complex, posttranslational modification of β-actin, sickled cells, 128:805
Sperm
of abalone, crystal structure, lysin dimer, egg envelopes dissociate dimers, monomer is active species, 130:1117
acrosomal process in *Limulus*, sequence and domain organization of scruin, actin–cross-linking protein, 128:51
inositol 1,4,5-trisphosphate receptors selectively localized to acrosomes of, mammalian, 130:857
regulatory mechanisms of acrosome reaction revealed by multiview microscopy of, starfish, 131:963
Spermatid perinuclear RNA-binding protein, a murine RNA-binding protein that is localized to cytoplasmic microtubules, Spnr, 129:1023
Spermatocytes, chromosomes initiate spindle assembly upon dissolution of nuclear envelope in, grasshopper, 131:1125
Sphingosine-1-phosphate, inhibits PDGF-induced chemotaxis of human arterial smooth muscle cells, modulation of PDGF chemotactic signal transduction, 130:193
Spindle
chromosomes initiate assembly of, dissolution of nuclear envelope in grasshopper spermatocytes, 131:1125
dynamics of in budding yeast, cell cycle regulation of dynein, 130:687
human protein kinase implicated in formation of, cell cycle regulation of activity and subcellular localization of PLK1, 129:1617
NuMA is required for organization of microtubules into aster-like mitotic arrays, 131:693
three-dimensional ultrastructural analysis of, *Saccharomyces cerevisiae*, 129:1601
Spindle assembly, impact of chromosomes and centrosomes on, in living cells, 129:1287
Spindle assembly checkpoint, Madlp is phosphoprotein component of, budding yeast, 131:709
Spindle development, two microtubule-associated proteins required for anaphase spindle movement in *Saccharomyces cerevisiae*, 130:1373
Spindle pole body
half-bridge of in yeast, Cdc31p-binding protein Karlp, 128:863
product of spindle formation gene sad1$^+$ associates with, fission yeast, viability, 129:1033
Spirogyra, phragmoplast of, functionally distinct from higher plant phragmoplast, 130:1359
Spisula solidissima, oocyte activation and passage is blocked in, metaphase/anaphase transition, inhibitors of HMG-CoA reductase, 128:1145
Splice variants, of collagen XII, differential expression and ligand binding, 130:1005
Splicing
is preferential to nervous system, coordinated cell growth, generates isoforms containing CAG repeats, LAR tyrosine phosphatase receptor, 128:415
variants containing v3 exon, proteoglycan forms of lymphocyte homing receptor CD44, 128:673
Splicing factors, conserved epitope on subset of SR proteins defines larger family of, pre-mRNA, 129:899
SR proteins, conserved epitope on subset of, pre-mRNA splicing factors, 129:899
SRY gene, of testis, nuclear localization, 128:737
Staining, for visualizing vacuolar membrane dynamics and endocytosis in yeast, new vital stain, 128:779
Starfish, regulatory mechanisms of acrosome reaction revealed by multiview microscopy of sperm in, 131:963
Structural biology, cell biological perspective on genome research, 131:1361
Submandibular gland, perturbation of branching epithelial morphogenesis of, antibodies against domain E3 of laminin-1 and integrin α6 subunit, 129:521
Substrate boundaries, growth cone turning at, role of microtubules, 128:127
Sympathetic neurons, protection by viral proteins E1B19K and p35, cell death induced by NGF deprivation, 128:201
Synapse formation, ARIA is concentrated in synaptic basal lamina of developing chick neuromuscular junction, 130:1423
Synapsin I
anchors synaptic vesicles to actin cytoskeleton, dephosphorylated, videomicroscopy, 128:905
deficiency of results in structural change in presynaptic terminals in murine nervous system, 131:1789
Synaptic vesicle protein, structure of synaptogyrin defines novel, p29, 131:1801
Synaptic vesicles
anchored by dephosphorylated synapsin I, actin cytoskeleton, videomicroscopy, 128:905
biogenesis of, in vitro, 130:1041
recycling in, t-SNAREs syntaxin 1 and SNAP-25, organelles, 128:637
Synaptobrevin
biogenesis of synaptic vesicles in vitro, 130:1041
similar subcellular localization and biochemical properties with cellubrevin, PC12 cells, 129:219
Synaptogenesis
developmental regulation of membrane traffic organization during, mouse diaphragm muscle, 130:959
embryonic nerve–muscle, distribution of α-dystroglycan, 129:1093
Synaptogyrin, structure of defines novel synaptic vesicle protein, p29, 131:1801
Synaptonemal complex, Zipl-induced changes in, polycomplex assembly, 128:455
Syntaxin, rbSEC1A and B not in stable complex with, syntaxin 1, SNAP-25, axon, 129:105
Syntaxin 1, present in organelles, t-SNAREs, SNAP-25, synaptic vesicle recycling, 128:637
Syntrophin
binds to dystrophin, alternatively spliced exon, 128:363
binds to dystrophin COOH terminus, mammalian α1- and β1-syntrophin, alternative splice-prone region, 128:373
3T3 cells, cell surface expression of receptor protein tyrosine phosphatase RPTPμ is regulated by cell–cell contact, 131:251
T cells
COOH-terminal sequence motifs target T cell protein tyrosine phosphatase to ER and nucleus, 131:631
mutants with defects in capacitative calcium entry, physiological roles of CRAC channels, 131:655
Tail domains, chromatin binding site in, nuclear lamins, interacts with core histones, 131:33
Talin, homologue of *Dictyostelium* assembles at leading edge in response to chemoattractant, 129:179
Targeting
of the *Saccharomyces cerevisiae* Kre2p/Mntlp α1,2-mannosyltransferase to *medial*-Golgi compartment, 131:913
of two glucose transporters from *Leishmania enriettii*, mediated by NH_2-terminal domain, 128:499
of yeast [H$^+$]ATPase, gene *AST1* prevents mislocalization of mutant ATPase, vacuole, 128:39
Targeting signals
in GLUT4 glucose transporter for internalization and for targeting to insulin-responsive compartment, 130:1071
molecular regulation of GLUT-4 targeting in 3T3-L1 adipocytes, 130:1081
and subunit interactions in coated vesicle adaptor complexes, 131:619
Tau, interaction with neural plasma membrane, mediated by tau's amino-terminal projection domain, 131:1327
tea genes, new genes in fission yeast cell morphogenesis and their role during cell cycle, 131:1529
β-Tectorin, molecular cloning of, chick, extracellular matrix molecule of inner ear, 129:535
Telomerase, RNA localized in replication band and subnuclear organelles in hypotrichous ciliates, 130:243
Telomeres, silencing of in yeast, carboxy termini of Sir4 and Rap1 affect Sir3 localization, multicomponent complex, 129:909
Telophase disc, retention of postmitotic spindle and, correlates with synchronous cleavage recovery, delay of HeLa cell cleavage into interphase using dihydrocytochalasin B, 131:191
Temperature sensitivity
Drosophila development requires spectrin network formation, 128:71
of a simian virus 40 large tumor antigen, type X collagen gene expression in mouse chondrocytes, 128:239
Temperature-sensitive mutant
of dynamin, clathrin-independent pinocytosis is induced in cells, 131:69
yeast *SEC16* gene encodes multidomain vesicle coat protein that interacts with Sec23p, 131:311
Tenascin-R, functional domains of polypeptide of, cell attachment site, binding with F11, F11-mediated neurite outgrowth by tenascin-R, 130:473
Tensin, in chicken cardiac, molecular cloning, expression, and mapping, high affinity actin-capping domain, 128:1095
Tension, kinetochore chemistry is sensitive to, may link mitotic forces to cell cycle checkpoint, 130:929
Terminal differentiation, of keratinocytes, regulation of cell surface β1 integrin levels, 128:1209

Terminal domains, NH_2 and COOH of ezrin, inhibition of cell extension, 128:1081
Testes
development of involves spatiotemporal control of PDGFs and PDGF receptors gene expression and action, 131:1105
nuclear localization of, gene product SRY, 128:737
Tethering and rolling, integrin VLA-4 supports, VCAM-1, 128:1243
Tetrahymena thermophila, acetylation of lysine 40 in α-tubulin is not essential in, 129:1301
TGF-α, extracellular matrix regulates whey acidic protein gene expression by suppression of, mouse mammary epithelial cells, in culture and transgenic mice, 129:1115
TGN, capacity to retrieve escaped ER proteins extends to *trans*-most cisterna of Golgi stack, 129:309
Thiol agents, and Bcl-2 identify alphavirus-induced apoptotic pathway that requires activation of transcription factor NF-kappa B, 131:1149
Thiolase, import into peroxisomes, *PEB1* in *Saccharomyces cerevisiae*, hydrophilic intra-peroxisomal protein, WD repeat family, 129:65
Thrombospondin 1, appraisal of, diversity of function in matricellular proteins, 130:503
Thrombospondin-1, low density lipoprotein receptor–related protein as an endocytic receptor for, 129:1403
Thrombospondin-4, promotes neurite outgrowth, extracellular matrix protein expressed in developing and adult nervous system, 131:1083
Thymocytes, dexamethasone-induced apoptosis in, alterations in mitochondrial structure and function, 130:157
β-thymosins, actin filament disassembly is final trigger for exocytosis, nonexcitable cells, 128:589
Thymus, epidermal growth factor promotes neural phenotype in epithelial cells of, neuropoietic cytokine expression, 130:183
Thyroglobulins, folding of, calnexin and BiP act as sequential molecular chaperones, endoplasmic reticulum, 128:29
Tip attachment complexes, of membrane/microtubule, allow assembly dynamics of plus ends to push and pull membranes into tubulovesicular networks in interphase *Xenopus* egg extracts, 130:1161
Titin, interactions between myosin and, 131:1471
Tobacco
cytokinesis in BY-2 and root tip cells of, cell plate formation in higher plants, 130:1345
different sensitivity to wortmannin of two vacuolar sorting signals indicates presence of distinct sorting machineries in, 130:1307
Tonsil, sialomucin CD34 is major L-selectin ligand in, human, high endothelial venules, 131:261
Tooth development
expression of *Notch 1*, *2*, and *3* regulated by epithelial-mesenchymal interactions and retinoic acid in, mouse, determination of ameloblast cell fate, 130:407
heparin-binding growth/differentiation factor is regulated by retinoic acid and epithelial–mesenchymal interactions in, mouse, cell proliferation and morphogenesis, midkine, 129:267
Topoisomerase II–dependent chromatid core separation step in formation of metaphase chromosomes, postprophase, 131:7
TPM2 gene, products perform distinct functions, tropomyosin is essential in yeast, 128:383
Transcription factors, regulation of Oct1 and NF-Y, liver-enriched transcription factor DBP, cell size regulation controls cellular RNA accumulation, 128:467
Transcytosis
differential targeting of glucosylceramide and galactosylceramide analogues after synthesis but not during, Madin-Darby canine kidney cells, 131:645
intracellular routing of wild-type and mutated polymeric immunoglobulin receptor in hippocampal neurons in culture, 130:1447
Transcytotic transport, in cultured neurons, trafficking of cell surface β-amyloid precursor protein, 129:431
Transferrin
evidence for nonvectorial and retrograde, early endosomes of HEp2 cells, 128:549
transferrin-binding protein complex is receptor for uptake of, *Trypanosoma brucei*, 131:1173
Transferrin receptors
barriers for lateral diffusion of, plasma membrane, receptor dragging by laser tweezers, fence versus tether, 129:1559
are selectively retained by lumenal sorting signal, long-lived endocytic recycling compartment, oligomerized transferrin receptors, 129:1509
Transferrin-binding protein complex, is receptor for transferrin uptake in *Trypanosoma brucei*, 131:1173
Transferrin-like GPI-linked iron-binding protein, in detergent-insoluble noncaveolar microdomains at apical surface of fetal intestinal epithelial cells, 131:939
Transforming growth factor-α, and β-amyloid precursor protein share a secretory mechanism, 128:433
Transforming growth factor-β1
modulates β1 and β5 integrin receptors, expression of αvβ6 heterodimer in human keratinocytes, implications for wound healing, 129:853
regulates axon/Schwann cell interactions, 129:443
Transforming growth factor β1-dependent epithelial cell hypertrophy, involvement of pRB family, 129:245
Transgene, regulation of muscle-specific, retinoic acid, 129:1345
Transgenic mice
different type I collagen-producing cells in, *cis*-acting DNA elements of mouse pro-α1(I) collagen promoter direct expression of reporter genes, 129:1421
overexpression of human NFM subunit in, endogenous NFL and phosphorylation state of NFH subunits, 129:1629
Transglutaminase, in myofibril assembly of chick embryonic myoblasts in culture, 130:1127
Transglutaminase-catalyzed matrix cross-linking in differentiating cartilage, osteonectin as major glutaminyl substrate, 129:881
trans-Golgi, retention of plasma membrane protein in, mutations in cytoplasmic domain of asialoglycoprotein receptor subunit H1 result in *trans*-Golgi retention, 130:285
Translocation
enzymatic product formation impairs of competence NADPH:protochlorophyllide oxidoreductase, chloroplast receptor–binding function, plastid precursor protein, 129:299
nascent chain–Sec61p interactions accompany, ER membrane, stage- and ribosome-specific alterations, 129:957
of RNP particle, structural interaction between nuclear pore complex, 129:1205
β subunit of signal recognition particle receptor anchors α subunit to endoplasmic reticulum membrane transmembrane and peripheral membrane GTPases, 128:273
Transmembrane domain, determinant in cytoplasmic tail of cation-dependent mannose 6-phosphate receptor prevents trafficking to lysosomes, 130:1297
Transplantation, of histocompatible myoblasts in dystrophin-deficient mdx mouse despite production of antibodies against dystrophin, 131:975
Transport, nucleoporin p62 complex of rat nuclear pores, binding of nucleoporin p54 to the rod domain of p62, 128:251
Transporter associated with antigen presentation, misfolded major histocompatibility complex class I molecules accumulate in expanded ER-Golgi intermediate compartment, 131:1403
Trinucleotide repeat transcripts, in nuclei of myotonic dystrophy cells, 128:995
trkA
NGF-stimulated retrograde transport of, mammalian nervous system, 130:149
regulation of nerve growth factor receptor gene expression in sympathetic neurons, 130:1435
Tropomodulin, requires tropomyosin for assembly, thin filament assembly in embryonic chick cardiac myocytes, 129:683
Tropomyosin
is essential in yeast, *TPM1* and *TPM2* products, 128:383
mutants affect cytokinesis, forced expression of chimeric human fibroblasts, 129:697
tropomodulin requires, thin filament assembly in embryonic chick cardiac myocytes, 129:683
Trypanosoma brucei
organelle positioning, segregation, and cytokinesis in, microtubule polarity, 128:1163
transferrin-binding protein complex is receptor for transferrin uptake in, 131:1173
Trypanosoma cruzi, retention of glucose units added by UDP-Glc:glycoprotein glucosyltransferase delays exit of glycoproteins from endoplasmic reticulum, 130:771
Trypanosome-soluble factor induces IP_3 formation, intracellular Ca^{2+} mobilization and microfilament rearrangement in host cells, 129:1263
t-SNAREs, syntaxin 1 and SNAP-25 in organelles, synaptic vesicle recycling, 128:637
Tubular networks, role for in mitotic fragmentation of Golgi stacks, COP I-independent pathway, 130:1027
Tubular organelles, autocrine motility factor receptor is marker for, membranes, 129:459

Tubulin
anatomy of flagellar microtubules, polarity, seam, junctions, and lattice, 128:81
structure of growing microtubule ends, two-dimensional sheets close into tubes at variable rates, 129:1311
α-Tubulin, acetylation of lysine 40 in, not essential in *Tetrahymena thermophila*, 129:1301
γ-Tubulin
can nucleate microtubule assembly and self-assemble into novel tubular structures in mammalian cells, 130:1137
is minus end-specific microtubule binding protein, 131:207
γ-Tubulin gene, is essential for cell growth and microtubule organization in *Saccharomyces cerevisiae*, 131:1775
Tumor suppressor, *overgrown hematopoietic organs-3* gene of *Drosophila*, *importin*-like protein accumulates in nucleus at onset of mitosis, 129:1473
Tumorigenesis
bcl-2 overexpression inhibits cell death and promotes morphogenesis but not, human mammary epithelial cells, 129:1363
suppression by mutant c-H-*ras* oncogene expression, programmed cell death in intestinal epithelial cells induced by three-dimensional growth conditions, 131:1587
targeted disruption of CD44 in MDAY-D2 lymphosarcoma cells has no effect on subcutaneous growth or metastatic capacity, 131:1849
Tumors, gap junction turnover, intracellular trafficking, and phosphorylation of connexin43 in Brefeldin A-treated rat mammary tumor cells, 131:1193
twinstar mutations, result in defects in centrosome migration and cytokinesis, *Drosophila* gene encoding a cofilin/ADF homologue, 131:1243
Type I collagen, -producing cells in transgenic mice, *cis*-acting DNA elements of mouse pro-α1(I) collagen promoter direct expression of reporter genes, 129:1421
Type II receptors, osteogenic protein-1 binds to activin, induction of activin-like effects, 130:217
Type X collagen, gene expression in mouse chondrocytes, immortalization by temperature-sensitive simian virus 40 large tumor antigen, 128:239
Tyrosine
agrin-induced phosphorylation of, immobilization of nicotinic acetylcholine receptors in mouse C2 myotubes, 131:441
phosphorylation of, adhesions of Ras-transformed breast epithelia, 130:461
phosphorylation of, cytoskeletal tension regulates release of fibroblast adhesions, 131:525
Tyrosine kinase
insulin stimulates tyrosine phosphorylation of caveolin, 129:1523
recruitment of epidermal growth factor receptors into coated pits requires, 129:47
substrate eps15 is constitutively associated with plasma membrane adaptor AP-2, 131:1831
substrate of p120, E-cadherin/catenin complexes, 128:949
Tyrosine kinase receptor, stereochemical model for activation of, oligomerization of epidermal growth factor receptors on A431 cells studied by time-resolved fluorescence imaging microscopy, 129:1543
Tyrosine kinases, exogenous glycosyl phosphatidylinositol–anchored CD59 associates with, membrane clusters on U937 cells, Ca^{2+}-signaling competent, 131:669
Tyrosine phosphatase PTPμ, associates with cadherins and catenins in vivo, receptor protein, 130:977
Tyrosine phosphatases, alternative splicing is preferential to nervous system, coordinated cell growth, generates isoforms containing CAG repeats, 128:415
UDP-Glc:glycoprotein glucosyltransferase, retention of glucose units added by, exit of glycoproteins from endoplasmic reticulum, 130:771
unc-44 gene, is necessary of proper axonal guidance in *Caenorhabditis elegans*, ankyrin-related gene, 129:1081
Urokinase plasminogen activator receptor, α-2 macroglobulin receptor/Ldl receptor-related protein-dependent internalization of, 131:1609
Urokinase-type plasminogen activator receptor is localized in caveolae, GPI-linked protein, 129:335
Utrophin, syntrophin binds to dystrophin, alternatively spliced exon, 128:363
Vacuolar protein sorting gene 27, controls vacuolar and endocytic traffic through prevacuolar compartment in *Saccharomyces cerevisiae*, 131:603
Vacuolar proteins, in vitro reconstitution of cytoplasm to vacuole protein targeting in yeast, 131:1727
Vacuolar proton pump, transport from late endosomes to lysosomes depends on, sorting of integral membrane proteins in endosomes, 130:821
Vacuolar targeting, different sensitivity to wortmannin of two vacuolar sorting signals indicates presence of distinct sorting machineries in tobacco cells, 130:1307
Vacuole
isolation of yeast mutants in cytoplasm to vacuole protein targeting pathway, 131:591
protein sorting to, vesicle-mediated protein transport, regulatory interactions between Vps15 protein kinase and Vps34 PtdIns 3-kinase, yeast, 129:321
visualizing membrane dynamics of, new vital stain, endocytosis in yeast, 128:779
Vacuole inheritance, Pho80 cyclin redirects Pho85 kinase to disrupt, *Saccharomyces cerevisiae*, 130:835
Vacuoles, Golgi and vacuolar membrane proteins reach, *vps1* mutant yeast cells, plasma membrane, 129:35
VAMP, biogenesis of synaptic vesicles of in vitro, 130:1041
Vascular endothelial cells, high affinity immunoreactive FGF receptors in extracellular matrix of, modulation of FGF-2, 128:1221
Vascular endothelial growth factor, endothelial receptor tyrosine kinases involved in angiogenesis, 129:895
Vasopressin, differential localization and role of calsequestrin, differentiated myoblasts, 128:341
VCAM-1, integrin VLA-4 supports tethering and rolling in flow on, 128:1243
Vesicle coat complexes, sequential coupling between CopII and CopI, endoplasmic reticulum to Golgi transport, 131:875
Vesicle coat protein, yeast *SEC16* gene encodes, interacts with Sec23p, 131:311
Vesicle proteins, phosphatidylinositol 4,5-*bis*phosphate–sensitive casein kinase Iα associates with synaptic vesicles and phosphorylates subset of, 130:711
Vesicles
accumulation of at sites of plasma membrane disruption, exocytosis, 131:1737
annexin XIIIb implicated in traffic of, apical plasma membrane, 128:1043
anterograde and retrograde traffic between rough endoplasmic reticulum and Golgi complex, 131:1387
direct membrane retrieval into, exocytosis in sea urchin eggs, 131:1183
human SEC13Rp is located on, yeast, endoplasmic reticulum, 128:769
Myo2 transport in, yeast class V myosin, 128:1055
SED4 encodes yeast endoplasmic reticulum protein that binds Sec16p and participates in formation of, 131:325
Vesicular stomatitis virus G protein, Rab7 is important regulator of late endocytic membrane traffic, 131:1435
Vesicular transport
phosphatidylinositol 3-kinase involved in, wortmannin causes mistargeting of procathepsin D, lysosomes, 130:797
Sec6, Sec8, and Sec15 are components of multisubunit complex which localizes to small bud tips in *Saccharomyces cerevisiae*, 130:299
transmembrane movement of water-soluble analogue of mannosylphosphoryldolichol, mediated by endoplasmic reticulum protein, 130:529
Vesiculated Golgi membranes, reconstitution of into stacks of cisternae, NSP required in stack formation, 129:577
Vimentin
detyrosinated microtubules function to localize intermediate filaments of, fibroblasts, 131:1275
differential targeting of protein kinase C and CaM kinase II signalings to, 131:1055
Vinblastine
role of microtubule dynamics in growth cone motility and axonal growth, 128:139
transport of dendritic microtubules establishes nonuniform polarity orientation, 130:93
Viral infection, protein of nuclear domain 10 is redistributed upon interferon treatment and, molecular characterization of NDP52, 130:1
Viral Jun, cell cycle–dependent nuclear import of, regulated by phosphorylation of serine adjacent to nuclear localization signal, 130:255
Viral proteins, protect sympathetic neurons from cell death, E1B19K, p35, NGF deprivation, 128:201
Vitamin D, constitutive expression of calreticulin in osteoblasts inhibits mineralization, 131:1351
Vitelline envelope, crystal structure of abalone sperm lysin dimer, egg envelopes dissociate dimers, monomer is active species, 130:1117
VLA-5, L1 adhesion molecule is cellular ligand for, 131:1881
Vps15, regulatory interactions between Vps34 PtdIns 3-kinase and, vesicle-mediated protein transport, protein sorting to vacuole in yeast, 129:321
Vps1 protein, in mutant yeast cells, Golgi and vacuolar membrane proteins, plasma membrane, 129:35

v-Src, activation of disrupts sarcomeres in quail myotubes, maintenance of differentiated state in skeletal muscles, 130:871
V-src kinase, shifts cadherin-based cell adhesion from strong to weak state, β catenin not required for shift, 131:1839
WD repeat
hydrophilic intra-peroxisomal protein is member of, *PEB1* in *Saccharomyces cerevisiae*, import of thiolase into peroxisomes, 129:65
required for arm assembly, 78,000 M_r intermediate chain of *Chlamydomonas*, outer arm dynein, 129:169
Whey acidic protein gene, extracellular matrix regulates expression of, suppression of TGF-α in mouse mammary epithelial cells, in culture and transgenic mice, 129:1115
Wortmannin
causes mistargeting of procathepsin D, phosphatidylinositol 3-kinase involved in vesicular transport to lysosomes, 130:797
role for phosphatidylinositol 3-kinase in sorting and transport of lysosomal enzymes in mammalian cells, 130:781
two vacuolar sorting signals sensitive to, presence of distinct sorting machineries in tobacco cells, 130:1307
Wound healing, implications for, transforming growth factor-β1 modulates β1 and β5 integrin receptors, expression of αvβ6 heterodimer in human keratinocytes, 129:853
Wounding
calcium-regulated exocytosis required for cell membrane resealing, 131:1747
vesicle accumulation and exocytosis at sites of plasma membrane disruption, 131:1737
Xenopus
protein phosphatase 1 regulates formation of endoplasmic reticulum in vitro, cytoplasmic dynein-driven, 128:879
reconstituted nuclei depleted of a vertebrate GLFG nuclear pore protein, p97, defective in nuclear growth and replication, 128:721
Xenopus
distribution of α-dystroglycan during embryonic nerve–muscle synaptogenesis, 129:1093
early events in DNA replication require cyclin E and blocked by $p21^{CIP1}$, 130:755
embryonic axis induction in, Armadillo repeat domain of β-catenin, intracellular signaling, 128:959
members of NAP/SET family of proteins interact with B-type cyclins, 130:661
membrane/microtubule tip attachment complexes allow assembly dynamics of plus ends to push and pull membranes into tubulovesicular networks in interphase egg extracts of, 130:1161
nuclear lamin isoprenylation oocytes in, lamin B3, uptake into nucleus, 129:17
nuclear pore complex assembly studied with biochemical assay for annulate lamellae formation, 129:1459
regulation of DNA synthesis, cdk2, Cip1, licensing factor, 129:1
Xenopus laevis
GTP binding protein Rho in constitutive endocytosis in oocytes of, 130:1319
maturation of oocytes in, inhibition of G-protein α_s subunit, component of plasma membrane and yolk platelet membranes, 130:275
Yarrowia lipolytica, Pay32p is intraperoxisomal component of matrix protein translocation machinery in, 131:1453
Yeast
actin-dependent mitochondrial motility in mitotic, cell-free systems, motor activity on mitochondrial surface, 130:345
carboxypeptidase Y folding in, BiP/Kar2p serves as molecular chaperone, 130:41
class V myosin in, Myo2, vesicular transport, 128:1055
DnaJ homologue in, Scj1p can function in endoplasmic reticulum with BiP/Kar2p, conserved domain that specifies interactions with Hsp70s, 129:979
DNM1 participates in endosomal trafficking in, dynamin-related gene, 130:553
Gaa1p in, required for attachment of completed GPI anchor onto proteins, 129:629
GLFG repetitive region of nucleoporin Nup116p interacts with Kap95p in, essential nuclear import factor, 131:1699
half-bridge of spindle pole body in, Cdc31p-binding protein Kar1p, 128:863
in vitro reconstitution of cytoplasm to vacuole protein targeting in, 131:1727
isolation by two-hybrid system in, PICK1, a perinuclear binding protein and substrate for protein kinase C, 128:263
Mad1p of spindle assembly checkpoint in budding, phosphoprotein component, 131:709
NAP1 protein acts with Clb2 to perform mitotic functions and to suppress polar bud growth in, budding yeast, 130:675
novel nuclear pore protein Nup82p binds to fraction of Nsp1p, 130:1263
nucleoporins Nup170p and Nup157p in, complementation with vertebrate homologue Nup155p and functional interactions with yeast nuclear pore–membrane protein Pom152p, 131:1133
NUP82 is essential nucleoporin in, required for poly(A)$^+$ RNA export, 130:1275
Nup120p required for NPC distribution and mRNA transport in, nucleoporin, 131:1659
polarized cell growth in, cortical actin cytoskeleton assembly, 128:599
Sac1p mediates adenosine triphosphate transport into endoplasmic reticulum of, required for protein translocation, 131:1377
SEC16 gene in, encodes multidomain vesicle coat protein that interacts with Sec23p, 131:311
telomeric silencing in, carboxy termini of Sir4 and Rap1 affect Sir3 localization, multicomponent complex, 129:909
visualizing vacuolar membrane dynamics and endocytosis in, new vital stain, 128:779
Ypt1 GTPase is essential for first two steps of secretory pathway in, 131:583
Zip1-induced changes, synaptonemal complex structure and polycomplex assembly, 128:455
Yolk platelets, component of plasma membrane and membranes of, stimulation of *Xenopus* oocyte maturation by inhibition of G-protein α_s subunit, 130:275
Ypt1, GTPase is essential for first two steps in yeast secretory pathway, 131:583
Ypt1 protein, nucleotide exchange factor required for Ypt1 GTPase mediated protein transport, 130:1051
Z discs, association with NCAM polypeptides, heart development, muscle-specific domain, 128:209
Z-disks, inhibition of CapZ during myofibrillogenesis, alteration of assembly of actin filaments, 128:61
Zebrafish, elevation of cytosolic free calcium associated with cytokinesis in embryo of, 131:1539
Zinc-binding domain, is required for targeting maternal nuclear protein PwA33 to lampbrush chromosome loops, 131:563
Zip1 protein, induces changes in synaptonemal complex structure and polycomplex assembly, 128:455
Zoids, microtubule polarity in organelle positioning, segregation, and cytokinesis, trypanosome cell cycle, 128:1163
Zygote formation, Fus2 localizes near site of cell fusion and is required for cell fusion and nuclear alignment during, 130:1283